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THE
MATE
AND

HIS

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DUTIES.

By the late Capt. J. J. KELLY, of Dundalk, author of the "Companion to the Nautical Almanac."

CONTAINING

REMARKS ON DISCIPLINE, CAUSES OF MUTINY, ERRONEOUS TREATMENT OF YOUNG MATES, FORECASTLE BULLIES, DUTIES TOWARDS THE MASTER, DUTIES OF THE WATCH, WATCH AND WATCH, PROPOSED METHOD OF KEEPING WATCH, REEFING, ANCHOR WATCH, RIGGING, RELATIVE STRENGTH OF ROPE AND CHAIN, POWERS OF THE DIFFERENT TACLES, REPAIRING SAILS, CUTTING OUT SAILS, CANVAS BOOK, WORDS OF COMMAND AND SEA TERMS USED BY THE FRENCH, ITALIANS, SPANIARDS, AND LASCARS IN THEIR RESPECTIVE LANGUAGES, USEFUL IN WORKING SHIP WITH MIXED CREWS OR IN THE EAST INDIES.

TO WHICH IS ADDED,

THE ANSWERS TO THE QUESTIONS IN THE
STEAM EXAMINATION.

ALSO, A MEMOIR OF THE AUTHOR.

LIVERPOOL:
ROCKLIFF BROTHERS, LTD., 44 CASTLE STREET.

TWO SHILLINGS.

"THE MATE AND HIS DUTIES."

SUCH is the title of a book containing remarks on discipline, the mate's duties towards the master, duties of the watch, (sea and anchor,) the most unusual operations, and useful suggestions in rigging, directions for repairing, sewing, and cutting out sails, words of command and sea terms in Italian, Spanish, French, and Bengalee, and concluding with some good advice on general conduct. It is a work calculated to be of the greatest assistance to all young officers, not only from the practical hints and suggestions thrown out for their guidance in all the duties they may be called upon to perform, but from the sound and judicious advice it contains as to the regulation of their conduct on all occasions. Officers of every grade will do well to peruse it attentively, as they will derive much instruction from it. The writer (who is a Master in the Merchant Service) has had considerable experience, and is evidently one of those who has the welfare of his profession at heart. *The Mate and his Duties* should be in the hands of all merchant officers, for young and old may derive benefit from its perusal.—*Mercantile Marine Magazine.*

It would be well if the class of persons to whom these pages are addressed, would look into them, and read therein the causes of their own discomforts, and learn from them their remedy. On all subjects concerning the very important duties of a mate in reference to the master and his crew, his responsible position, and the evil and good which results from that position being discreetly filled or not, he will find ample information to profit by himself, and to impart to his commander. What is it that makes our merchant ships in too many cases the very emporium of misery, we might almost say, reckless insubordination, mutiny and all its evils? when they might be, supported as they are by law, the abodes of happiness. Our author attributes it all to the ignorance of those in command, who, destitute of the resources of knowledge, and ignorant of the mode of obtaining authority over their crew and a respect for their position, fly to the only resource they have in physical force, and thus at once stir up the brutal feelings of those whom they might control if they knew but how to control themselves. In our opinion the author is right. Ignorance, generally the twin sister of idleness, is the bane of power, and in the man of a mind prone to tyranny, produces the foregoing results; while the man of information in command has learnt from example how to command, to bear and forbear, has a happy ship, sets a good example to his crew, and is beloved and respected by them. Would that this were general in the British Merchant Service; and it is the production of such valuable essays as this addressed to the Mate by a Seaman that will go very far to make it so.—*Nautical Magazine.*

"The Mate and his Duties," a work that addresses itself intimately to a vast interest, for not only the mariner, but the shipowner and the emigrant should consult its contents.—*Liverpool Journal.*

It is a work which every sailor should read and ponder on.—*Chronicle.*

"Although many books have been written for the instruction of the mariner," writes the author of this very useful manual, "they in general apply to the shipmaster; and though read with avidity by the aspiring youth who looks forward to success in his vocation, the real wants of the mate are seldom mentioned." This cannot be said of his own book, which has been compiled with special reference to those wants, and which is full of valuable information, and of pertinent and practical suggestions upon every subject, professional or otherwise, in which the mate may be presumed to be particularly interested. It contains remarks on discipline, the mate's duties towards the master, duties of the watch, rigging, repairing, sewing, and cutting out sails, and general conduct, with a vocabulary of sea-terms and words of command, in Italian, Spanish, French, and Bengalee. It is written in a homely and intelligible style, and in a friendly and judicious spirit. Every mate ought to possess it.—*Mail.*

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R.L. Sparling

THE

MATE AND HIS DUTIES:

CONTAINING REMARKS ON

DISCIPLINE,

HIS DUTIES TOWARDS THE MASTER,
DUTIES OF THE WATCH,
(SEA AND ANCHOR,)

THE MOST UNUSUAL OPERATIONS AND USEFUL
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THE MATE AND HIS DUTIES.

THE disasters of the late winters have attracted public attention to the Merchant Service, and have led to many inquiries into the causes of the loss of life and property by British shipwrecks, that seem to increase in number and consequences every year.

The press has been severe on the shipmaster; censuring his want of skill in unmeasured terms, and drawing no very complimentary comparison between him and those of other nations. In education he is certainly their inferior, which can be accounted for by considering that in the great English seaports there are so many openings in business, and opportunities of getting forward, for an educated youth, that he will scarcely ever choose the sea for a profession.

It will be found that our most intelligent seamen are natives of distant country towns, or small seaports, where employment for the well educated boy is scarce.

Many of the recent losses have been more through want of experience than want of education; for a young man reared up in the southern trade and long voyages may be a well educated seaman, keep a faultless log, be expert at observations, and attentive to his charge, yet, when in channel, with thick weather and spring tides, where his sextant, chronometer, lunars and double altitudes are of no use, he is inferior to the most ignorant coaster, who can take the proper measures, without hesitation, after seeing the land or getting a cast of the lead, while the other is studying his charts, and perhaps running into danger at the same time.

As it is universally acknowledged that there is a striking difference between the commanders of English and those of foreign merchantmen, and many reasons have been given for their inferiority, it seems very strange that the mates (the material from which masters are made) have passed unnoticed. If we compare the position of the mate of a foreign ship with that held by one in the British merchant service, we must see a very great difference. In the latter it very often takes a practised eye to pick out the mate from amongst the crew, as he has sometimes to do as much work as three or four sailors. A good mate, according to the estimation of some, may be defined as a hard working man, who can turn his hand to the most menial work, who can bully the crew without any regular discipline, and who can eat with the cook when there are gentlemen on board; and this man, when a sudden vacancy occurs, is placed in command of a ship, and treated for the first time with respect from his employers; and if by chance he makes a quick passage at the commencement, he is petted and praised. This sudden change is too much for the man unprepared by education, and is the cause of many evils.

Although many books have been written for the instruction of the mariner, they in general apply to the shipmaster, and though read with avidity by the aspiring youth who looks forward to success in his vocation, the real wants of the mate are seldom mentioned. Seamen, who have written on nautical subjects, are most of them naval officers and retired masters of merchantmen, and the productions of their pens are more adapted to their own particular class than useful to those who hold subordinate positions in the merchant service. All that can be said about elevating the character of the shipmaster will be of no use, if, while he fills the situation of mate, he is altogether unheeded. It is generally taken for granted that the mate knows his duty. If he does, it is after years of experience, having only for his guide the customs of his predecessors, which he learns orally, perhaps, at a time when his inefficiency is severely felt.

If he wishes to get imformation about rigging, and buys an expensive work which treats of it, he is there told that brace blocks are hooked at the extremities of the yard, and clewline blocks near the centre. He finds an elaborate description of a long and a short splice, a bowline or a carrick-bend, and the most unusual operations are spoken of in a cursory and unsatisfactory manner; so that the amount of information he gets from it is very trifling, being altogether more calculated for the merchant's or lawyer's office than useful to the rigger. The retired shipmaster is the only one who can fearlessly publish the results of his experience. The man who remains in active service considers it a bold undertaking; for, subject to those casualties to which the best of his contemporaries are liable, in case of misfortune he becomes doubly conspicuous, from the notoriety he has gained by constituting himself an adviser. The retired mariner could serve those still afloat with his pen; but he is more prone to lament the degeneracy of modern sailors than to investigate its causes or to remedy the evils existing among them. We are often told that there is a great falling off in the men of the present day. This is a statement dispiriting to our youths, besides being an erroneous one; for, if we look to the preamble of the Act passed in the reign of Goorge II., (1729,) we may see the evils that called forth its enactment. It is a favourite theme of some authors. Even Homer, many centuries ago, spoke of the degeneracy (in size) of the men of his day, which, if continuing in the same ratio down to the present, would make us very contemptible when compared to our ancestors; but old armour and mummies show that men are the same size now as formerly. No doubt there were then, as now, men of large stature, above that of ordinary men; but, instead of making them kings and potentates, we put them into boxes, and show them to wondering children and rustics for a penny. The seamen of modern times are as good as their predecessors. They may be ignorant of many things they no longer require, but they have improved in others, which is more than an equivalent for their ignorance. There are few men who have duties more numerous than the mate of a merchantman. To fill the situation well, a man must be something more than a mere seaman—he is so often thrown upon his own resources that he has occasionally to be stevedore, carpenter, sailmaker, ropemaker, and painter; and when we consider that he is supposed to be able to fill the place of the commander, should circumstances require it, we find him filling a much more important office than many imagine. It is singular that men, when promoted to the command of a ship, so soon forget the vexations and grievances they suffered while they filled the office of mate, and take so little trouble to make the mate's situation more comfortable. A better regulated system is very desirable, as it would not only make the mate's own situation more easy and his occupation more agreeable, but more or less affect the comfort and order of the little community that he has under his charge.

The following pages, written by one who has spent the best part of his life in the merchant service, are dedicated altogether to the mate. The writer hopes that they may not be unacceptable to him or to those shipmasters who may treat his position with disrespect or his wants with indifference

They are not written with a view of teaching the business of the mate to landsmen or those unprepared by previous service, but for the use of those who are supposed to have spent several years on board ship, and who have sufficient knowledge of those parts of their profession that can never be taught by theory.

DISCIPLINE AND ORGANIZATION.

Amongst sailors, like other communities, there are all sorts of characters, tempers, and dispositions, to manage which, and to maintain a proper discipline amongst them, is a very rare quality in the generality of mates in the merchant service. Indeed, it is scarcely to be wondered at, when we consider the imperfect laws which at present regulate them. On long voyages, when a man cannot change his crew, he has no better means of keeping them in subjection than a captain of banditti. Respect to lawful authority can never be enforced by petty fines, which are not cared for when the blood is up, and the distance of the time of punishment is generally so great that both parties get cool, and say no more about their quarrels; and the fear of trouble with the laws has caused many a ruffianly character to go unpunished, after having conducted himself insolently the whole voyage. This is generally the case where the mate or master is of the same stamp.

The discipline of the British merchant service has never been very good, and at the present day there is little or no improvement. The Legislature has made several attempts to improve it, but without effect; and it is very likely to remain in the same state till there are more intellectual and more educated shipmasters and mates, to whom more discretionary power than they now have can be given.

If we investigate the causes of mutiny, we shall find that they are universally the results of mismanagement and tyranny. In all those cases of murder and mutiny by the crew, we seldom have anything but a one-sided account, particularly from ships manned by Lascars and Chinese. The provocation is seldom heard; and sailors of any sort are never anxious for responsibility, even where it is conferred in a legal way, much less are they covetous of taking charge of a ship when it comes in a questionable manner. As a class, they are not thieves, and though there have been instances of murder, for the specie on board, these may be considered as exceptions to the general character of seamen, for there are few men more impressed with the necessity of law and order, or a more wholesome dread of the authorities ashore; and if those who are intimately acquainted with the merchant service would read attentively the accounts given of mutinies, they will no doubt find some inconsistency. With insurbordination it is not so. Though too often the effects of mismanagement, there are very many ill-tongued rascals that nothing short of physical force can at all control, and to whom the present state of the law is only an inducement to carry on a very turbulent career, and who fancy they have a right to abuse the master and the mates every time they are out of temper. We may overrate the effects of a better education on the seamen. The man who possesses that dangerous thing, "a little learning," the "sea lawyer," or one that the Chinaman would say "savvies too mutchee," is not the most amenable to order.

One of the principal causes of insurbordination lies in the fact, that seamen have their superiors very often in their power; that is, things are often done that must not be made known to the authorities ashore, or in many cases to the owners of the vessel. Smuggling, inattention to the requirements of the Merchant Seamen's Act, and evasion of harbour regulations, cause the former to be dreaded, and drunkenness, mistakes in navigation, culpable delay, and many other things, make it against the interest of masters to bring the seamen into collision with the latter. Leaky, ill-found ships, and extra work caused by neglect and inefficiency in officers, are also causes for insurbordination. There are many who cry out for more power to punish the unruly. This, to a very great extent, is doubting the power that they really possess. No matter how unquestionable his authority, he who maintains good discipline without a strong afterguard is an uncommon man. To call out for the regular system of flogging is ridiculous; for no matter how much it had the approval of the Legislature, it could not be carried out without a sufficient number of officers, and where this sufficiency exists the flogging is not required. Few men would provoke a mate with sufficient back to give them a sound thrashing. Public flogging in the army and navy is more used for the *spectacle*, for example's sake, than for any good effects it may have on the individual, who seldom recovers from the disgrace of the punishment, and whose character is altogether sacrificed as a warning to others, who perhaps never before heard of the culprit. In a small community like the crew of a merchant ship, this display is not required, and it would be bad policy to degrade a man in the eyes of his shipmates, when he has afterwards to mix among them, and where his services cannot well be spared. This might goad him on to a very reckless career; but where there is repeated and wanton insolence, and smouldering mutiny detected in an individual, no ambiguous wording of any Act of Parliament should prevent his being summarily and severely punished, taking care that it should be for something so flagrant that he could not have any excusable sympathy from the rest of the crew. But the evil of this system is, that the mate is seldom content when he has got this far—in general acting the bantam cock towards his prostrate foe, triumphing over and daring him to a second encounter. It is acknowledged by all parties that they have much better discipline in American ships than we have. It is not the fault of a bad man to resist authority—it is nothing more than human nature; but in those ships human nature is not allowed to ooze out, being always in check by the fear of immediate chastisement.

Another cause of better discipline amongst them is, that they seldom have boys. The custom of carrying so many apprentices in British ships has done more to destroy discipline than many imagine. When an order or call is given, the men seldom stir till they find that it cannot be done by the boys alone, and then very often stand two calls, sometimes refusing to execute an order that they consider "boys' work." There is often much hard work done in the watch at night by the boys, while the men are on their beam-ends. Men in this way get into very bad habits; and so far is this system carried, that in many ships the seamen are much better off than the mates. However, many good crews are driven to a state of mutiny by the ignorance and brutality of shipmasters. If the men are well disposed, quiet and obedient, the ignorant man will say to himself, "I have them under, and I must *keep* them down." To do this he considers it indispensable to bully, threaten, and use all the terms in his vocabulary of epithets such as "trash," "sodgers," "guffies," &c.; and as there is no law in the Merchant Service which can punish a man for insolence, when it is provoked by low and ruffianly language, the quietest man will often retaliate, and very soon spread disaffection.

To maintain, therefore, a proper discipline, depends less on the power of the law than on the character and bearing of the officer. The best qualifications are firmness, almost approaching to obstinacy, and a perfect command of temper; the latter of itself gives a man a great superiority over others who want it. Firmness is what is most wanted by young mates, who sometimes are as much afraid of the grumbling of the men as the dissatisfaction of the master. Often when a young man can bear a "blowing up" from his superior, he would sooner execute the orders that he should issue than be growled at by the seamen. To overcome this diffidence requires a considerable amount of moral courage: it is a fault with most young men. Raised from a situation where there is no responsibility to the charge of a watch, he is too apt to feel over-conscious of his own inexperience, and fancies that every want of judgment and oversight on his part is made the subject of remark and conversation in the forecastle. In this idea he is pretty correct, but it should not annoy him in the least; for let him recollect that, if he was perfection itself, he would not the less be the subject of censure and criticism by the sailors, who, confined in the smallest part of at best a floating prison, can have no other conversation than about the conduct and qualifications of those aft; and perfect indeed must be the man whose character will pass the ordeal of that inquisition blameless. A sailor never gets a wetting that he does not declare she is the wettest vessel that ever he was on board of, and whatever work he is engaged in, he feels perfectly convinced that the mate sent him there because he was too long dry.

The young mate, when he is first placed in the charge of a watch, must recollect that he has nothing to gain from the foremast men, and that it is of little consequence how he may stand in their estimation. Most of them he may never see again, and, though he should not altogether treat them with contempt, he ought to look upon their blame or approval with perfect indifference. If he has strength of mind to do this, there is a great point gained, and it will be the means of saving him much vexation—not that he should be opinionated, or go always contrary to the suggestions of seamen, but his conduct should be such as to show them that he is not to be influenced by their opinion in cases where his duty points otherwise, such as making sail or keeping the yards in trim.

Complaining to the master should be a last resort; for, if he is often brought into collision with the men, the result is not looked upon as serious by them, and he might be so irritated and forget himself so much as to scold the mate before them. Much might be said to masters on this head; but, as this is not written for *their* instruction, the mate must only endeavour to accommodate himself to all tempers of masters, and be perfectly indifferent to all dispositions of men, neither allowing their remarks to cause him to deviate from a strict line of duty, nor letting them see that they are so hurtful to his feelings as to make him give them extra work; for, if they find that they can "touch him in the raw," extra work will not prevent them them from doing so.

There is a very common error that most young mates fall into, and that is to pretend to know more than they really do. One who has just finished four or five years' apprenticeship, the first two of which were, perhaps, spent in the cabin or galley, most part of the remainder in the "rowse about gang," is shifted into another ship, and made second or third mate, and put to superintend jobs about the rigging and sails that he never had an opportunity of learning himself, goes a round-about way to conceal his deficiency, which only tends to make it more glaring. Deception, when seen through, is perfectly ridiculous, and is sure of itself to punish the man who practises it.

He must recollect that when he becomes a mate it is not expected that he must be able to do a job as well as a rigger, but that his education is little more than begun. It is only then he sees how many things he is deficient in—all which he must take the first opportunity of learning, and be perfectly indifferent to the remarks on his deficiency. What is required of him is to see the orders of his superiors executed with care and promptness. All seamen are apt to impose on young officers, and those who get in the watch with one imagine they must have easy times. If there are many boys in the ship, and at night anything is to be done, most of it falls to their lot, the mate not liking to hear the grumbling of the sailors, which the latter soon find out, and consequently never go to anything without a growl. This is the natural consequence of the want of an experienced officer over them; but the young mate has not only to fear the sneers of the sailors, but also a "blowing up" from his superiors, which is too often done in so public a manner as to let the crew see that he has no friend aft, and, conscious of this himself, he is not anxious to insist on implicit obedience from the men, well knowing that if he is obnoxious to them, they will have the satisfaction of seeing him treated with contempt by his superiors. The practice of turning the second mate forward is a very bad one—if he is incompetent, his character should be better known before the situation was filled; but the simple knowledge of the fact, that in any fit of passion the master may send him forward, will make him *over cautious* of displeasing those who may in a short time be his messmates. A junior mate has but a sorry life in the merchant service, crushed and disheartened by the master and chief mate, and disliking to make more enemies by being strict with the crew, he is every one's servant; and so accustomed to be "blown up" for trifles, he gets so nervous as to make great mistakes, and seeks condolence from those he ought to hold in subjection, gradually losing his authority till they are completely his masters.

In most cases of mutiny and disturbance on board ship, they have originated in members of the second mate's watch, the effect of imperfect discipline. In vain does the master preach to him of keeping them under, and keeping a tight rein, when, at the same time, he himself refuses him respect, and says things to him that he would not say to one of the foremast men. This treatment has caused many a promising youth to throw up his situation in disgust, and enter upon a reckless career before the mast. He seldom imagines that it is the way in which all young mates are treated by indiscreet and ignorant masters; and it is through this severe and galling ordeal that most of the cleverest of his superiors have passed. On the contrary, he supposes that he is really unfit for the situation; and, once his self-reliance is gone, he gets nervous and incautious, and all his imaginary disqualifications become real. To remedy this, he must remember that there are few men in command of ships who have known anything of practical seamanship before they held the situation of mate. It is only then that they begin to be interested in the working of a ship, having before only obeyed orders, hardly knowing the cause, and heedless of the result of many of them. It is only when he has had for a while the handling of a ship that he becomes familiar with the nature of those duties that can never be learned by theory; so that it might as well be expected from a green hand to heave the lead or haul out a weather earing, as to find a young mate who will not make mistakes. Therefore, he must not be down-hearted or nervous when he finds his own want of experience, but note carefully his own deficiency, and, as the knowledge of an evil is half its cure, it will be corrected at the first opportunity.

There are some jobs about rigging which seamen look upon as criterions of capacity, such as turning a shroud on a dead-eye, stropping a nun-buoy, working a cringle in a sail, splicing a hawser, and several others in mat-making, grafting, &c., all which are exceedingly simple, and considered difficult because they are seldom done; any one of them might be learnt by a landsman in a very short time, and yet the young mate often suffers a great amount of misery through his ignorance of them, which he is frightened of exposing by asking any one to shew him. This is folly for instead of being ashamed of asking, he should delight in letting it be seen that he is not afraid to learn his business from any one, and bear in mind that these are mere trifles compared to the real calling of the mariner.

There are times when it is necessary to be severe, but on the other hand many a good crew have been rendered mutinous by swaggering and bullying mates, who in general are very apt to go into extremes, either submitting altogether to sneers and disrespect, or becoming the bully or tyrant. The mate having passed over his first years of office, in which he is apt to fall into the former line of conduct, he is determined, when he gets a fresh crew, to begin in earnest to keep them in subjection, and then becomes the tyrant. There are few who can hit upon a middle course, and the same advice will not do for all; it would be useless to recommend mildness and quietness to those already too much so, or energy and firmness to the hot-headed or stubborn. Different seamen also require different treatment; the intelligent well-disposed man will give very little trouble, as he generally goes about his work systematically, gets through with it quietly, and will, if not spoiled by familiarity, go the whole voyage without giving dissatisfaction. If such a man, when he gets a wetting, occasionally "damns the bloody hooker," or when interrupted in his yarn or smoke by a call to the braces, appears annoyed, no attention should be paid to him, for he himself well knows that the former he must take with his profession, and the latter is an indispensable duty, and he is only grumbling at the wind, so no notice of it is necessary; but no duty or discipline should be relaxed that might make it appear that he gains anything by his grumbling. With the regular insolent "growl" the case is different; he cannot be too soon curbed, or too closely watched; he, if allowed "headway," will very soon destroy the harmony of the ship's company, which, if once broken up, remains so for the rest of the voyage. A man who is likely to prove the source of disaffection or disturbance, must as soon as possible be made an example of, even at the loss of his services, by keeping him in irons, and curtailing his allowance of provisions for a time. Let not his being a good seaman prevent his being treated in this manner; if he is the best man in the ship, so much the better. The example will be greater when the rest of the crew see their best man prostrate; it will be enough for them, and except in cases where the master is either drunk or insane, no seaman will ever attempt a rescue, as that is mutiny, which removes restraint from the master, and puts into his hands much more discretionary power than he would otherwise have. However, in most cases, when a mutinous character is put in irons or otherwise punished, there is little to fear from the sympathy of the rest of the crew, for a ringleader of disturbance is generally a bully of the forecastle, whose sarcasms and threats are more dreaded than regular authority, and by an indirect but powerful coercion they are obliged to coincide with his opinions. Those only who have lived in a forecastle can have any idea of the unlimited sway that one individual can have over all the rest. Nothing can be done without his sanction, and though in their own mind they feel his tyranny, yet they will commit the most flagrant acts of disobedience to their superiors sooner than do anything that would meet with his disapproval. When such a man is removed or severely punished, there is a secret exultation, which, if properly managed, may lead to the most satisfactory results. By proper management, it is meant that after a man is subdued, no threats should be used to call it to the remembrance of the rest, or for every trifling fault to irritate them by saying they will be served as so and so; this is quarrelling with all at once, which is very bad policy. They can see and appreciate that a bad character has been removed from amongst them, although they may not say so, and it is much better to seem to suppose that they had no sympathies with the offender. When it is necessary to put a man in irons who is disposed to shew resistance, if the mate happens to be a powerful man, it is very wrong in him to give himself the trouble of doing it himself, merely to show that he *can* do so; for it then assumes the appearance of a struggle of brute force between two equals, and not the carrying out of discipline. It is always better to suppose the man to be ironed capable of overcoming two, and then, if available, take twice that number, so that it may be done without trouble or loss of time. If there are four men of equal strength, it will take three to put the fourth in irons against his will, except they abuse him by beating his knees and elbows; the latter mode should, if possible, be avoided, except under particular circumstances—in fact it may nearly always be done without; for though the British seaman, disciplined and officered, is notorious for daring, yet, when opposed to organised authority, is actually a coward, and as a mob, sailors are contemptible—even in the street row and tavern brawl, when opposed to a mob of any other description, they generally get the worst of it. This may be a novel and strange assertion; but those who know them well will acknowledge it true. When a whole crew refuse duty, there is no other way of proceeding than stopping the supply of provisions, which must either bring them to terms or force them to the alternative of adopting a course that will lead those to the gallows who may escape being shot at the time.

A man of education, common sense, and coolness, may do what he pleases with most seamen. A few calm remarks on their faults, calling to their recollection the agreement they have signed, reminding them of the necessity of organization and discipline even amongst banditti, pointing out to them how much better they are under the authority recognized by law, and voluntarily acknowledged by themselves, than they would be under those who constitute themselves ringleaders in disturbance, would have a powerful effect on most crews; but the language they have from their superiors is the same as that in the forecastle; and often, very often, inferior. The man in authority must look more to himself than to the legislature for the maintenance of order and discipline. Gentlemanly behaviour will get the respect of the crew, and, consequently, strengthen his authority over them. One who is above an interchange of Billingsgate will hardly ever receive a provocation to use it. When there has been kindness shown to a sailor and he is afterwards ungrateful, it is folly to remind him of favours; for it only makes him worse; and, conscious of his own ingratitude, he will become quite reckless, and totally regardless of again meriting favour or esteem. But this ingratitude is often the result of a very common system of heaping favours with the hand and insults with the tongue; and favours can scarcely be considered as such if the receiver is afterwards reminded of them.

Smoking tobacco is now so universal from pole to pole that any attempts at putting it down would be useless; however, if there is one place where it is not only excusable but desirable, it is on shipboard during a long voyage, not amongst the officers but amongst the seamen. Experience has shewn that the man who is naturally of a discontented disposition is not made a better man by having his pipe taken from him. It may be questioned whether or not it has all the soothing qualities attributed to it by its votaries, but it cannot be denied that it makes a man think twice before he speaks, and a pipe after a man's anger has nearly the same effect as a night's sleep. The look-out of a man with a pipe in his mouth is at night more to be depended on than that of one who does not smoke, for he has something to keep him awake. If we regard smoking in the view of being dangerous, it will be found that more accidents have happened through its suppression than otherwise; for every one knows that the regular smoker, if he gets a chance, will enjoy his pipe even in the vicinity of gunpowder, and if surprised, will stick it in a jacket pocket, or amongst cotton bales, where it may cause a conflagration; so that it will be found that there have been more accidents from fire in those docks where it is prohibited than in those where it is allowed; for in the latter they smoke without fear, and in the former lights are smuggled somewhere, and that, perhaps, amongst oil, tar and oakum.

The apprentices or boys ought to be altogether under the protection of the chief mate, who should prevent the seamen and petty officers from abusing them, which is too often the case when boys go to sea too young. There is, certainly, strictness required, but it should not be accompanied by improper severity; the respectable, well-educated youth, who wishes to make the sea his profession, feels sadly disappointed if, in addition to the hardships, dangers, and exposures he anticipated, he finds that they are mere trifles compared with the insults, abuse, and privations that accompany them. It is disgust at this, and not fear of danger, that causes so many to give up the sea after one voyage. There are few old seamen who cannot call to mind scenes of cruelty towards boys, in many cases ending in death, which had been logged as a natural event. It is a sudden revolution in the life of a spirited boy, reared by moral parents, when first at sea he finds his feelings trampled on, and is obliged to be the servant of those who use such language as makes him wonder why they have not corruption in their lips and cancer in their tongues.*

It is a mistaken opinion, adopted and entertained by a great many, that boys are better off in the half-deck than in the forecastle. In the steerage or half-deck there is no check to the tyranny of the petty officers, and perhaps a greater bully a boy cannot have over him than the older apprentices; but in the forecastle there can seldom be a piece of oppression enacted by an individual that will not meet with the disapproval of the rest. Where all are equal, public opinion is generally strong on the right side, and each acts as a check upon the other. As for morality and example, boys are seldom improved by a nearer vicinity to the quarter deck.

It must be acknowledged that sailors have many things to complain of, and much that might be remedied. The biscuit used in some vessels has the appearance and taste of having been made from the sweepings of the flour store, and their meat is cooked and served without the least attention to comfort. A piece of boiled junk, without mustard or those extras that in a man-of-war makes it palatable, is no very tempting fare. The coffee and tea would scarcely be known as such by landsmen; and their beef is sometimes weighed out to them without making any allowance for the bone that sometimes amounts to one half.† At the repeal of the Navigation-laws, sailors cried out (or more interested parties did so for them) against the employment of foreign ships and sailors, saying that these poor wretches would be fed cheaper and live upon the coarsest food, and perhaps be the means of bringing down the quality of the rations in English ships, never supposing what is really the fact, that though it may be cheaper, the mess of the Mediterranean sailor is far more comfortable and palatable than that of the English one. The wine, maccaroni, calavanses, onions, &c., together with the superior cooking of the one, is far better than the kid of boiled rice or flour that (sometimes only) accompanies the salt junk of the other.

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* By some mates boys are very thoughtlessly sent aloft in squalls to clear things, which, by proper attention, would not have been foul, and by this negligence the lives of boys are endangered by being sent aloft to clear a royal sheet or clewline just when the whole weight of a tropical squall is about to strike the ship. In rigging out topgallant and royal studdingsail booms, boys run many risks; for if there are no beckets to hold on by, the booms, when well out, will have such a leverage, that the least roll of the ship may throw them off the yard.

† It was decided in February, (1854,) by a London magistrate, that beef should be weighed out independent of bone.

The health of sailors is not properly looked after; for even in ships where the greatest insubordination exists, the full value of their wages is taken out of them in work and exposure. There is no Act of Parliament more disregarded than that which allots a certain amount of room to each man. Instead of having the forecastle to themselves, sailors must live amongst all sorts of lumber, and though they go through the motions of keeping it clean, it can never be so in reality as long as tar and varnish casks, oakum, hawsers, stream chains, and provision casks are daily dragged about among their beds. Homeward-bound Chinamen have not in their forecastles one inch more room than what is sufficient for one watch to dress themselves at once, and their wet clothes must be thrown on deck till there is weather fit to dry them; and if one or two get sick, the place is made so perfectly miserable that men will sleep on deck wherever they can find a shelter sooner than venture below. When a complaint of want of room is made to the captain he points to his own room, and shews there also three or four tiers of tea chests; thus the over-zeal of captains (owners are often unjustly blamed) adds misery to the never very edifying deathbed of the sailor, by causing him to be abandoned by his shipmates, and to die perhaps with an imprecation on his lips. The solemnity of the burial at sea is often spoken of, when the coffinless mariner is confined to the deep by the hands of his sorrowful shipmates; but the fact is, that except in cases of sudden death, it is too often a welcome spectacle; the loss of the deceased has long before ceased to be felt, and he has latterly become a burden.

If fear of an epidemic would cause the authorities to visit the forecastles of all those vessels carrying light cargoes, and the circumstances attending every death at sea were as rigidly investigated as at the inquest on land, sailors would not be old men before forty, and the country would have more of them in case of need.

It seems very strange that as ships are made larger, and with an increase of foreigners in the merchant service who understand but very imperfectly the orders given, that the boatswain's call should be so much disused; formerly the crews of the ships of four hundred tons did everything to the sound of the call, and now, in vessels of five times that size, where the voice requires to be strained in order to be heard, the call seems to have been forgotten. Much confusion might be prevented by the use of this little instrument, particularly where the crew do not all speak the same language. Its different sounds can be heard and understood when the voice cannot, and even its use of calling attention should not be overlooked.

When men are not expecting an order, the words may not be distinctly heard by all, and consequently they have to ask each other such questions as, "What's that," "What is it," "Did you hear it," &c., and not unfrequently wait till the order is repeated. The shrill sound on the call denoting "attention"* obviates all this, and causes the order that follows it to be distinctly heard by everybody.

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* There are eight different sounds of the boatswain's call, their usual application as follow:—

Haul taut, or Attention,
Hoist away,
High enough,
Belay,
Lower,
Let go,
Heave round the capstan,
Veering hawser, or cable.

HIS DUTIES TOWARDS THE MASTER.

In well-regulated ships the master seldom interferes in ship's duty; the mate, therefore, may be considered as acting commander, except where his youth or inexperience renders an interference necessary. He must endeavour to please in all things, for his promotion and future success very much depend on the character he may receive from the man under whom he sails, who has many opportunities, both by conversation and correspondence, of communicating faults to his employers, that the mate will never have a chance of refuting; and even where the fault is not on his side, a quarrel ends universally to his disadvantage. No one ever thinks or cares about inquiring into particulars; it is only known that he has not suited his last master, and few take the trouble to inquire further. There is no situation where a man's temper is so tried as on board ship, on a long voyage; apart from all society, from all superiors, and from the restraint imposed by the occasional presence of strangers, there is a chance of his shewing every unamiability of temper and disposition. Confined in a ship, on a long voyage, if he has no resources in himself, there is no other way of passing his time than by eating, drinking, smoking, and sleeping; it is, therefore, scarcely to be wondered at, if occasionally he should vary the monotony of his life by fault-finding, drilling, and otherwise making himself disagreeable. The "land saint and sea devil" is a very common character, especially amongst men not long in command, who may have been unfortunate in winds, unpaying freights, and unforeseen accidents; all which have a tendency to sour the temper, and cause the quiet and amiable man to change when at sea into a character quite the contrary, and make one who had till then been perfectly sober, seek forgetfulness in the bottle. In fact, this is his greatest trial, for where there is no one to restrain him, and where he has unlimited control, if his mind is ill at ease, through bad prospects of pleasing his employers, or through obstinate winds that meet him, as he fancies, point by point, the way he wishes to go, he must be a strong-minded man if he does not fall a prey to gloomy thoughts, and seek to dispel them by drinking. However, there are many good masters, and the mate who has the good fortune to serve one of these, ought to appreciate his situation, and by his conduct and attention to his duties, let it be seen that he does so; but there are men who, without any known cause, are so disagreeable, that they can never keep a mate two voyages successively, who are not only tyrants in their own capacity, but who also occasionally undertake to perform the duties of mate, boatswain, cook, steward, and carpenter, making themselves so contemptible that they provoke retaliation of abusive language, and very often lose their authority altogether, which they can never regain, and their mates, who perhaps served with credit in other vessels, may be sent away in disgrace, and find it difficult to procure re-employment. With a man of this description he must make up his mind to bear a great deal, to consider himself as a mere engine to carry out the wishes of the commander without allowing his own opinion to interfere with them, to bear in mind that a good character from such a man would be a very rare recommendation, and that it is not degrading for one of high intellect and sound judgment to obey the orders of another not gifted with these qualities, when he engages to do so. He may feel a pride in shewing that he can obey a mere puppet when it is part of his duty, and letting those from whom he expects obedience himself, see that he can be subordinate and pay outward respect to one who, in everything except office, is his inferior. He ought to find out, if possible, before or at the commencement of a voyage, the master's way of carrying on work, what are his fancies and prejudices, and if any of them differs much from the opinions the mate may have formed previously, or from what he saw in his last ship. He should not express disapproval even indirectly, but accustom himself to them, and appear at least to consider them the best, and instead of seeking illustrations to show their inferiority, he should try to improve and more fully develope their efficiency. Supposing the master has a particular way of ranging the cable on the windlass before letting go the anchor, it would be very wrong in the mate to relax his attention to the range and not try to prevent the chain from jamming, merely to prove the system to be a wrong one. It might afterwards occur to him that he could see in it a great superiority to his own plan, that at first escaped his observation. To gain the good will even of "a sea devil," there is no better way than to make him pleased with himself, and to respect those prejudices that few seamen are without. He must indeed be an ignorant man if nothing can be learned from him, and though he may be deficient in other things, he has generally the advantage of the mate in experience, and even his faults might be considered as warning beacons to one with tact enough to profit by them.

But in all cases the master's orders and wishes must take precedence of everything with the mate; and though the former, with improper familiarity, might act in such a manner as to throw aside the difference of position, the latter should never deviate from a respectful demeanour, nor by coarse language and low slang shew a disposition to meet him half-way. He should recollect that being respectful himself will generate respect in others.

Some masters are always very great with their mates, or, on the contrary, are constantly wrangling with them. It is always best to keep such a man at a respectful distance, even in his turns of good temper, and, by doing so, to shew him that his familiarity is not appreciated. A mate is far more comfortable with a man to whom he hardly ever speaks, than with one of an uneven temper. It is also bad policy to be very sensitive of small slights, or to have the ears ready to catch ever muttered disapprobation, and very wrong to be constantly complaining about the men, and irritating the master with a rehearsal of all their faults, and impressing him with the idea that they are the greatest "trash" afloat. A complaint to him should be for something the mate cannot rectify, and the more seldom made the better; it will then be looked upon as serious, and all the more dreaded. Sometimes, when in port, a man is running about all day on the ship's business, disappointed in freights, annoyed by trickery of "land sharks," low spirited by letters from fault-finding owners or agents, and comes on board at night anxious and wearied; the mate then commences a history of faults in the crew, that, perhaps, he himself was the prime cause of, adding much to the master's annoyance, and will cause a turmoil that in the end may be very disagreeable to himself. Should the master, as too often happens, come on board at night intoxicated, all conversation with him should be as much as possible avoided. Perhaps he himself is aware of his state, and wishes to retire unobserved; therefore, beyond merely shewing that there is some one on the watch, he should be left to himself. In all cases of drunkenness in the master, the mate has many opportunities of seeing the effects of this degrading vice, how much the respect of the crew is lost by it, and so disgusting is it that many drunken mates have been made sober men by sailing one voyage with a drunken master.

However, all legal orders that he chooses to issue must be attended to, and as the mate has merely to obey, his position with regard to a master of any sort is not so difficult as may at first be imagined.

If he at once makes up his mind to give up all outward preference to his own opinion, at least for the period of their sailing together, he can make his situation tolerably easy. Some men are of a bad temper constitutionally, and punish themselves more than those upon whom they exercise it.

Misfortune on one side, and very great discretionary power on the other, may spoil any man, and make him go beyond the limits of his authority; indeed, this limit is so badly defined, that not one in fifty knows it: the law is so intricate and badly understood, that, in many cases where quick decision and confident determination are absolutely necessary, the man in command of a turbulent crew moves cautiously and timidly, much to his disadvantage. At other times, where he thinks that he is acting legally, he finds that he is liable to be prosecuted for an assault.

The two following cases, taken from the Liverpool papers, will show what trifling circumstances may alter a decision, and change the plaintiff into a prisoner:—

"MUTINY ON BOARD THE QUEEN OF THE WEST, 6th MARCH, 1853.—On Saturday, the Queen of the West, (emigrant ship,) lying in the river ready for sea, was the scene of a fearful encounter, between the captain and mate on the one side, and a large portion of the crew on the other. Captain Mors, who was acting as deputy for Captain Hallet, went on board the vessel about one o'clock for the purpose of mustering the men, when some disagreement took place—the men insisting that the vessel was insufficiently manned, that thirty-six was her complement, and not twenty-six, which latter was deemed sufficient by Mors—the captain, who pushed back one of the men, and told him to mind his duty, was assailed by the crew with marlinspikes and belaying-pins, knocked down, and severely injured. Recovering himself somewhat, he went aft, and, seizing a revolver-pistol, aimed at the head of one of the ringleaders, Jack, but the pistol missed fire. He then armed himself with a cutlass, and, with the assistance of the mate, made a complete onslaught on the crew, cutting and wounding all who resisted, and driving the mutineers down into the hold. Another of the ringleaders, Downs, was tied up and flogged on the spot, and the police having been communicated with, eleven of the men were removed in custody to the central police-office, while another, whose arm was dreadfully mutilated, was removed at once to the Northern Hospital. The evidence having been taken by Mr. Superintendent Clough, the prisoners were removed to Birkenhead, (the affray having occurred on the Cheshire side,) with the exception of those whose wounds required hospital treatment. On Monday, ten of the men were charged by captain Mors before the Birkenhead magistrates,—Sir E. Cust and Messrs. J. S. Jackson and J. D. Case, with mutiny. Mr. Aspinall, barrister, appeared on behalf of the men, whose names were George Freeman, Thomas Brown, James Black, Alexander Jack, John Droner, James Thompson, James Trainer, William Penny, Jas. Fowler, and Henry Downs. Mr. Snowball, solicitor, perferred the charge on behalf of the captain. After the evidence had been adduced in support of the charge, Mr. Aspinall commented in very severe terms on what he termed the tyrannical and brutal conduct of the captain, and staked his character as a lawyer on the assertion that if the men had even been guilty of the grossest mutiny, and the captain, after he had once escaped from the crew, the mutiny being over, had shot any one, he would most unquestionably have been guilty of murder. And if that were so, then having fired his revolving-pistol twice, three barrels of which were loaded, but fortunately missed fire, he was to all intents and purposes liable to an indictment for murder, or at least the intent to do grievous bodily harm. The conduct of the mate, too, and captain afterwards, in cutting the defenceless crew with their cutlasses, also demonstrated that they did not desire to quell the mutiny, if any existed, but to wreak their vengeance for some injury, real or imaginary, they supposed had been done to them; and for this brutal attack, by which one man's arm was nearly severed, they were deserving of marked puishment. Witnesses having been called for the defence, Mr. Snowball replied, and having pressed for a summary decision, the magistrates directed that Freeman must pay a fine of £5, or be imprisoned two months; Jack, Trainer, and Fowler, £3 each, or six weeks in default; Brown, Droner, Thompson, Penny, and Downs, to pay costs only, or be imprisoned fourteen days in default."

Here we see a deputy in command push one of the men, for which he is assaulted by the rest, (and a man having been "pushed" suffers all the indignity of a blow,) he then uses the most deadly of all weapons, a revolver, and with such an instrument in his hand he had little to fear from men armed only with marlinspikes and belaying-pins. However, he was not content with driving them off and handing them over to the police, so close on both sides of the river, but made a "complete onslaught" on men already subdued, and tied up one, and flogged him on the spot, that spot within view of the authorities of the place.

We have seen above that he had their sanction, who, to the punishment already inflicted, added fine or imprisonment.

In the other case, we shall see that the same line of conduct has been differently treated:—

"ASSAULT WITH INTENT TO MURDER ON THE HIGH SEAS, 10TH NOV., 1853.—Nicholas Jackson Nattrass, master of the Matanzas, was charged with having, on the 26th of June last, at the port of Bahia, shot at George Wake, one of the seamen, with intent to kill and murder him. Messrs. Monk and Aspinall were for the prosecution, and Mr. Seymour defended the prisoner. George Wake, the prosecutor, a seaman belonging to Sunderland, deposed that in March last he engaged at Rio, in the Matanzas, the previous crew having been discharged by the consul, with the exception of a seaman named Macdonald. They put back to Rio to take in water. Returning to Bahia they got upon a reef in a fog; but got to Bahia in about twenty days, where they loaded. While loading there, an apprentice, who was acting as chief mate, and who had several quarrels with the captain, was discharged by the consul. The crew also complained of the captain to the consul. While waiting to clear out on the quarantine ground, a dispute arose owing to the chain cables being put into the men's berths, and two of the hands refused to work. On the Saturday night following, the captain discharged the ship's muskets, and loaded them afresh. Next morning witness went to captain Nattrass, and asked him if he was going to sea, the two men still refusing to work. Witness then said he would not go to sea unless the captain took the two men ashore and brought two others. Witness next went to reeve the fore-bowlines, and afterwards went to breakfast. The captain then sent for the crew: five, including witness, went, and were asked to weigh the anchor. Witness said he would not till they got the full complement of hands. The question was repeated—witness again refused; when the captain pulled out a pistol and said, "You may take that." He then fired a shot, hitting witness on the shoulder. When witness saw the pistol, he "slewed" his shoulder, or he would have received the shot in his body. Before going down he saw the captain take two more pistols out of his pocket and present them at other two men, who expressed themselves willing to weigh anchor and he did not fire. Witness was taken ashore afterwards to the English Hospital, where he lay better than three months and a-half. On cross-examination, witness said that previously the crew had signalled for a man-of-war's boat; and, on re-examination, that the captain had been laid up with yellow fever about the time of the occurrence. The bullet still remains in witness's shoulder. Thomas Savage was next called. He corroborated the previous witness in all material points, as did also William Stewart, another of the hands of the Matanzas. Mr. Seymour, in addressing the jury for the prisoner, adverted to the extenuating circumstances of the responsible position of the captain at the time, with a scarcity of hands in the port, and the prevalence of yellow fever, as well as to certain discrepancies in the evidence. While Mr. Seymour was enlarging on the provocation received by the master, Baron Alderson interrupted him, saying that he was beside the question. The law was, that if a master struck a mariner without cause, or used a deadly weapon as an instrument of correction where moderate correction might be inflicted, if death ensued, it was manslaughter or murder, as the case might be—the power of a master over a seaman, by common law, being the same as that of a parent over a child, or a master over his apprentice or scholar; and no mortal man would contend that either of these had a right to use a pistol as an instrument of correction. Mr. Seymour replied that, what he was saying was, that it was probable the captain had fired the pistol for the purpose of exerting lawful authority over, and intimidating a mutinous and disorderly crew, and under the influence of excitement. His lordship then charged the jury. He held that the prosecutor had committed an act of disobedience: but at the same time, it was not reasonable correction for the captain to shoot him, either with the intention of murdering him, or doing him bodily harm. In the present case, if the captain intended to kill, there must have been an intention to murder; but, if only to do grievous bodily harm, they would find the prisoner guilty on the second count only. The jury, after an absence of twenty-five minutes, returned a verdict of guilty of shooting, with intent to do grievous bodily harm. His lordship passed sentence of imprisonment with hard labour for eighteen months, adding that it was necessary masters should know that their duties and those of their crew were relative—that of the seaman being obedience, and that of the master, kindness."

If we divest ourselves of impressions made by reading what was apparently the previous character of Nattrass, and look to the mere fact of his shooting at a man who appeared prominent in a general refusal to heave the anchor up, we shall find that the case differs little from that of the "Queen of the West." The primary cause of both quarrels was the same—a short-handed ship. In Bahia there was a scarcity of hands, so that the request of the seamen could not be complied with. Now, had he inflicted the "moderate punishment" mentioned above, a blow was all he could give, and had they retorted, it is only known to lawyers whether or not his subsequent conduct would have been looked upon in the same light as that of Mors.* It is very difficult to find a man who will give a confident

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* Since the issue of the First Edition, the two following cases have been tried and decided upon :—

"SHOOTING A SEAMAN IN THE DOCKS.—Joseph Breck, captain of the American ship Harkaway, was indicted for shooting Lorenzo Corzen, one of his crew, about half-past ten o'clock on the morning of Monday, 10th July, (1854.) The Harkaway was hauling from the Canning Dock into the Canning Basin, when the steward came aboard in a state of intoxication, and attempted to force his way into the poop-cabin. He was pushed out twice by the second mate and the captain. The crew were engaged in heaving round the capstan, and the second time the steward was pushed out he fell against the men, and some of them rolled down with him. The mate came aft with a belaying pin, and struck at the steward, and a man named Kelly, who had come on board with him. The crew interfered to prevent this, and a general affray ensued, in which the mate was knocked down and jumped upon. During this state of things the captain came out of the cabin with a revolver, and fired twice in the direction of the men who were struggling with the mate on the deck. The prisoner returned to the cabin and procured another revolver from a passenger. A police-officer on the quay called out to the prisoner not to fire again, but he did so, and wounded Lorenzo Corsen on the back of the neck. Two police-opinion on matters of this nature. The acts of Parliament, that are like waste paper on board every ship, are no guides to mariners on this head. If any person conversant with maritime law would collect together all the decisions on cases of mutiny and assault, and explain them in plain practical language, he would confer a very great boon on the merchant service; such a work would be appreciated by all shipmasters, and the discipline of our ships would be much more perfect.

This digression is intended to show the mate that the master does not lie upon a bed of roses, and though bad temper in him is not the less to be blamed, the mate should consider its many causes, and make allowances accordingly.

officers went on board, and order was restored. The second pistol was taken from the captain, and it was found to be loaded in one chamber with powder and ball. Mr. Simon and Mr. Rushton prosecuted, and Sergeant Wilkins and Mr. Aspinall appeared for the defence. After the evidence of several witnesses, his Lordship told the jury that the prisoner was perfectly justified in acting as he had done, as he was only protecting his mate, whose life was in danger. The prisoner was accordingly acquitted, the Judge remarking, that *it was great oppression to prosecute him at all.*"

Here, it seems, the captain "was perfectly justified in acting as he had done," although he was actually in the dock, and in the presence of a police-officer.

The other case is a charge of assault on a shipmaster, the decision on which, in the opinion of the writer, was a very lenient one.

"CHARGE OF ASSAULT ON THE HIGH SEAS.—A powerful-looking seaman, named Thomas Hindron, was charged by Thomas Wallace, the captain of the ship Emporium, with assaulting him on the passage home from the Coast of Africa. Mr. Campbell appeared for the prosecutor, and Mr. Owen defended the prisoner. Mr. Campbell stated that the first charge against the prisoner was a charge of assaulting the Captain on the 7th November (1854,) and nearly capsizing him into the hold of the vessel. The next charge was that of embezzling the ship's stores; and he was also charged with taking money belonging to one of the seamen who died on board, and refusing to deliver it up to the captain; with striving to induce the seamen to disobey the captain's orders, and threatening to take possession of the ship, and put the captain ashore at the first land they came to. The captain having sworn that he was prevented from reading the entries in the log in the presence of the prisoner, from fear of violence being resorted to against him, the magistrate was of opinion that it might be put in evidence, and several entries were read, to the effect that the prisoner had used insulting and threatening language towards the captain, and had endeavoured to incite his fellow seamen to mutiny. Mr. Smith said that it was quite clear that the prisoner had behaved himself in such a manner as to interfere with the discipline of the ship, and he must therefore go to gaol for *one month*, with hard labour."

When the captain was assaulted and nearly thrown into the hold, if he had shot the prisoner it would be difficult to say what the decision would have been; but if a man is justified in using a pistol in a dock in defence of his mate, he is, no doubt, justified in doing so in defence of himself on the high seas.

The prisoner also threatened to "take possession of the ship and put the captain ashore at the first land they came to," and endeavoured to incite his shipmates to mutiny. This conduct certainly justified the captain in putting the prisoner in irons, and if he had not sufficient force to do so, or if his life was endangered in the attempt, he would (according to the decision in the case of the "Harkaway") be justified in using weapons. He refrained from doing so, and for the remainder of the voyage was evidently only in nominal command of his ship, and on giving up the mutineer to the authorities saw this flagrant case of mutiny punished by one month's imprisonment. If, in anticipation of cases similar to any of those mentioned, a shipmaster went to a lawyer and asked him how he should act in certain positions, few would tell him to act like the captains of the "Queen of the West" or "Harkaway," or that the commander of the "Matanzas" should have allowed his ship to lie in Bahia till some unforeseen event should bring more hands to the port; or, that he should have acted in the easy going, timorous manner of the captain of the "Emporium." If a lawyer will not venture an opinion (without delay) on matters of this nature, a shipmaster is placed in a very awkward position, when with a mutinous crew he must act with promptness and confidence—when hesitation must not be seen in his manner, nor indecision in his countenance. Another act of Parliament has been lately made, and though it provides for every other contingency, this subject is treated in it with the same avoidance of detail as in the previous ones, as if it was a point which the framers of the act considered too difficult to legislate upon.

In time of danger, should the master be wanting in coolness or decision, the mate should give his suggestions in a mild manner, avoiding, if possible, the appearance of dictation.

No matter how contemptible the master of the ship may be, it will never lower the mate to treat him with the same outward respect as one of an opposite character, and even where he is not particular in having his orders executed, no advantage should be taken of this; but, before going contrary to them, the reasons for doing so should be most satisfactorily explained.

The mate will find it much to his advantage if every order and suggestion of the master is attended to; therefore, a page of the mate's pocket memorandum-book should be kept apart for "Captain's orders," which, even if never carried out, should not be forgotten.

DUTIES OF THE WATCH, SEA AND ANCHOR.

The present system of keeping watch is open to some improvement, not so much as regards the men as the mates. Four hours' sleep is sufficient where they are relieved quickly, but they cannot always leave the deck as soon as relieved, and are sometimes up most part of their watch below. This is very often the case with the chief mate, who, in consequence, is too apt to make it an excuse to stand two or three calls, and keep the second mate waiting impatiently to be relieved. It would be better if the mates relieved each other every five or six hours, and many advantages would be found in this method. It would give them a chance to have more sleep, for, unlike the men, they cannot, or ought not, to make up for its curtailment by closing their eyes when on deck. It would also cause the eyes of the chief mate to be over both watches; for the crew, retaining their four hours' watches, would sometimes have the chief mate and sometimes the second over them: a very important thing; for as was said before, most disturbances arise from members of the second mate's watch, he (in general being a young man, or as is sometimes the case, only engaged for the voyage) allows a laxity of discipline that in time will effervesce in insurbordination. The larboard watch, in general, have a greater share of work than the others, which causes grumbling and dissatisfaction. All this would be obviated if both watches had both mates over them alternately, which would create a better feeling than generally exists between the mates themselves; for, considering the watches to belong to each respectively, they too often allow the petty quarrels and jealousies of the men to affect themselves. Many other good effects would arise from this system which would be seen on trying it, and no master would object to his mates dividing their time as best suited them. Although shifting watches have their advantages amongst the sailors, the mates have no particular occasion for them. The chief mate is generally on deck at sun time, and very often at seven bells in the morning watch, whether or not it is his watch on deck; therefore, standing watches would be desirable: and where it would not be agreeable to divide the time into periods of five or six hours, standing watches could be made without departing much from the old style.

Let the second mate's watch begin at noon and end at half-past four, being four and a-half hours—he seldom gets below sooner; the chief mate keeps till eight, three and a-half hours; the second mate till twelve, the chief mate till four, each keeping four hours; the second mate till half-past seven, three and a-half hours; and the chief mate till noon, four and a-half hours. It will be seen that this divides the time equally, eac having a watch of three and a-half, four, and four and a-half hours, giving the chief mate an opportunity of having his watch on deck at seven bells in the morning and forenoon, and where all hands are necessary in the afternoon, the chief mate can have all ready for them to "turn to" without hurry or confusion. It also gives the middle watch to the chief mate, which is the most particular one; for if the night is dirty, the master is up most of the first watch.

Since the issue of the previous editions, the Author has been told by several intelligent shipmasters that they have found many good results from adopting the above method of keeping watch, and all agree in saying that, nine cases out of ten of insubordination arise from members of the second mate's watch.

The system, very often adopted, of keeping up all hands in the afternoon, is a bad one; like slavery, it is a time-honoured abuse, that ought, as soon as possible, be abolished. Four hours in the middle watch, out of which must be taken the time a man is waiting to be relieved, (and if there is a shift of wind at midnight, half the watch is sometimes gone before he gets below,) with a few hours in the forenoon of interrupted sleep, (mostly taken for washing and repairing clothes,) is too little to prepare him for a day's work and eight hours watch on the same night. Some masters go so far as to keep up all hands in the forenoon, particularly in the West India trade. How far they are justified in doing so may be best known to themselves; but it is impossible for any man to keep a look-out at night who has been employed all day. Many say that sailors should be kept constantly moving to "keep the devil out of their minds" and for the prevention of scurvy; but this can be traced to ships' doctors, whose interest is to please the master, and knowing that it pleases many of them to say so, pretend that scurvy may be kept away by curtailing the necessary allowance of sleep.*

Now, if we look to statistics, we shall find that most cases of scurvy have broken out in badly-found and short-handed ships, where the regular "watch and watch" could not be adopted. To keep a ship in order, he must be a very inefficient mate who cannot do so without all hands, except after a long spell of bad weather; he has a few fine days to get all things to rights, or, in the trade winds, he may want to have the sails repaired or to overhaul the rigging. In either of these cases, the sailor takes it as he does a call to reef topsails, or tack ship, or any other indispensable duty: but the regular all-hands-work, when there is no occasion for it, he knows is only done to keep him moving, and regulates the amount of his work accordingly; so that where there is a good mate, we may see the result in a ship coming into port after having "watch and watch," in as good, or, perhaps, better order than another, on board of which the mate has been toiling the whole voyage with all hands. As to discipline, it is impossible to have perfection without the regular watch. The night look-out is out of the question, and if the braces require a pull during the meal-hour, or immediately after clearing up the decks, there is always a general murmur, for which they can scarcely be blamed. After a day of all hands, the master goes to bed and thinks there is a good look-out on deck. In this he is quite mistaken; for the men are all on their beam-ends, the mate of the watch is, if not asleep, at least nodding, and, if the yards require trimming, is reminded of the circumstance by the flapping of a studdingsail, or by the ship being taken aback. If a "small pull" only is required, the vessel is, perhaps, kept off her course till the change of the watch. In the Chinese

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* Most of the accidents which are attributed to want of look-out, are, in reality, the consequence of depriving the sailor of his scanty and uncertain intervals of rest, which are taken for the most trifling causes, and men are often placed on the look-out when they cannot possibly keep their eyes open. This is an idea which will be unpopular with that class of shipmasters who treat others "as they themselves have been treated," but many years' acquaintance with the customs of the merchant service, in sailing and steam ships, has convinced the Author that Dana, in his "Two Years before the Mast," but too truly states, that it is not to be wondered at, if sailors, after even a fine-weather voyage, have worn-out and sickly appearance.

Sea and Indian Ocean, where there is very often sultry weather all day, and heavy squalls and torrents of rain at night, called by sailors "Captain's weather," because it is fine for working during the day, the men are kept in the hot sun all day, and at night are exposed to heavy rain, and even in the short time allowed for sleep, the heat will not let some constitutions sleep below; they, consequently, lie in wet clothes somewhere about the deck, and after a night of perfect misery, go to their work in the morning languid and weak, and are kept up all day because the master thinks it is fine weather. Even when all hands are necessary, the mates should always have their watch below, for they *must* keep their eyes open at night. In trade winds, where all hands are kept up in order to get some necessary work done, and the object is to have it finished as soon as possible, the chief mate should remain in all night, the third mate or boatswain keeping his watch. This will materially forward the work, and allow the younger mates an opportunity of having charge of the deck when there is little to fear from their inexperience. Supposing the mate to be quite capable of keeping the yards in trim, and of knowing when and how to set and take in sail, we shall waive all hacknied description of such things, and direct his attention to what are too often considered trifles.

In the first place, no pride of experience or fear of ridicule should hinder him from calling the master, if danger is near, either from squalls or ships. He may be perfectly convinced that his doing so will not displease the master, and it throws the responsibility off his own shoulders.

The look-out at night is sometimes very much neglected, and a vessel is not seen till close to, when the common and often dangerous order of "hard up" is given, and helmsmen, if left to themselves, generally put the helm up when there is confusion. This habit is contracted in square-rigged ships, where more sail is carried than can be thrown aback with safety, and consequently being taken aback is much dreaded. If the helm could be put alee when the circumstances require it, there would be a less number of collisions, and even where contact would be unavoidable, ships would not strike with such force when thrown in the wind, as when they are kept away full. When a ship is in the track of other vessels, the mate in charge of the watch should not trust to the look-out from the forecastle, but occasionally go forward himself and see that he is attentive; for very often sailors hang a pea-coat and sou'wester on a handspike in the windlass, and are below filling their pipes, while the mate, seeing the [illegible] of a man on the forecastle, thinks that all is right. Neither must he trust to the helmsman, but watch carefully the course the vessel is making, so that if the master inquires about it he may be told at once, without referring to the helmsman. Inattention to this has been the cause of many accidents; for the man at the wheel may be thinking of the friends he has left, or soon about to see, more than his course, and perhaps mistake W.N.W. for W.S.W., and run the vessel into danger before he discovers his mistake.

On a dark night, when likely to fall in with vessels, the mate should keep in mind how the wind is, also the position of the land, so that he may have an idea of the probable course or tack he may meet vessels upon, and consequently be less likely to be taken by surprise. The best place to carry a light is under the jibboom, or (if the foretopgallantsail or royal is furled) at either of those yards. In all other places the light is hidden by some sail. In either case, a lantern should be sent up or out, by a block and line, so that the light may be kept well trimmed; otherwise, if the light is out forward, lest they may have the job to take the lantern in and out, the sailors will not report it "out," and when a lamp burns badly, they get tired of going aloft for it, and if there is any work going on it is neglected altogether. A rope jackstay of rattline stuff from the jibboom to either cat-head would not be in the way of anything, or a small line rove through the jewel block, on the topgallant yard-arm, or a tail-block further in, would interfere with no other gear, and by bracing the yard forward, the light would not be obscured by anything; at all events, lights should be particularly attended to; having to get one suddenly very often confuses and blinds the officers of the watch, and some serious accident is the consequence.

The log and lead lines ought to be under the care of the second mate, who should have them always properly marked and measured, and constantly at hand; not, as is too often the case, to be looked for when wanted, and perhaps foul or unmarked. Leads in small vessels are usually too light, being very often sent on board in proportion to the size of the vessel; whereas, if anything, they should differ in a contrary ratio, for large ships, when hove to for soundings, are more stationary than small ones, which very often go fast to leeward, consequently requiring the lead to descend with greater rapidity. Every winter we have fearful illustrations of the consequences of neglecting this almost infallible guide. It is a troublesome and delaying operation, but is one that sailors seldom grumble at, and though they may occasionally curse the "blue pigeon," as they call it, yet they are all firmly impressed with the necessity of its frequent use.

It should be insisted upon, as one of the duties of the morning watch, to observe the sun's amplitude when rising (if visible), and enter it in the log-slate in the place *engraved* for it. If this observation was taken as regularly as the meridian altitude, we should have less mistakes in variation and deviation, and the compass would not be so often blamed for misleading the mariner as it has been of late years.

There is some excuse for neglecting the amplitude at sunset, for there are many things to divert the attention of the mate of the watch about that time: but in the morning the sun's appearance is watched and waited for as a signal to "turn to," and such a simple, and at the same time important, aid to the navigator should never be neglected.

Here it may not be out of place to remark, that notwithstanding the many improvements in binnacles, there is room for another that seems to have escaped the attention of the manufacturers. The difficulty of taking *exact* bearings by the binnacle compass is felt by every seaman when a light or headland is suddenly reported, and very often not till after the bearings are pencilled off on the chart is it found that they were not taken correctly; and bearings taken by two persons at the binnacle compass seldom agree to half a point, scarcely ever to a quarter—an important difference in cross bearings. An amplitude or standard compass on deck will remove this difficulty, but it is useless to talk of these to many coasters, who like to take bearings by the compass they steer by, and who have no room on their decks for extra ones, nor in their brains for difference of deviation, this space being already occupied by the variation marked on the charts; therefore, if some addition or change of form was made to supply this desideratum, it would be a valuable one.

In many crack ships, where everything is in first-rate order about the rigging, there is very often gross and culpable neglect of having a sufficient quantity of gaskets on the yards. More sails and men have been lost off Cape Horn and the Banks of Newfoundland, and even in the Channel, through this (usually considered trifling) deficiency, than any other cause.

If a course has to be taken in, it is hauled up; the men are wet in doing so; they are sent aloft to furl. After a quarter of an hour's struggle to get the sail in, they are kept upon the yard for an hour or more in trying to secure the sail with gaskets barely sufficient for a snug harbour furl. The frost catches them; the sail gets adrift; they lose their hold; and, perhaps, fall overboard: but are almost certain to lose some of their fingers and toes.

Every sailor has experienced the annoyance of being kept on the yard trying to make fast the bare end of a gasket with cold fingers, and this experience ought to make mates more careful in having a sufficient number of good length; but, strange to say, there is scarcely anything more neglected. The man who prides himself in having his rigging without a chafe or a broken rattline, is often so careless on this point, that he considers it sufficient if there is anything in the shape of a gasket on a yard or jibboom. In fine weather, when men are kept employed at things of much less importance, if an insufficient number of gaskets on the yards are spoken of, the mate very often says, "If the sail is furled *properly*, there are as many as will be required;" and when those occasions are spoken of, when there is a probability of a bad furl, the mate (conscious of his own smartness) hints that "his way of carrying on work is to have everything done ship-shape," thus giving people to understand that where he superintends, the possibility of a bad furl is out of the question. However, when the men are aloft, and after a hard struggle to get in a sail flapping with a noise like a peal of musketry, perhaps a squall coming that may endanger the masts, the same man will call out, "Bear a hand there," "Roll it up *any way;*" and when told that there are not gaskets enough, he calls out, "Haul up the bight of the buntline," or if a jib, "The bight of the downhaul;" thus acknowledging there are times when his snug furl is hardly possible.

It is surprising with what indifference the masters and mates of vessels look aloft and see men for a long time on the yards without the least thought about the *cause* of the delay, usually entertaining the idea that, "if they were sailors they would have been down long ago;" or if there are foreigners amongst them, attributing the cause of the delay to this fact. Now, there is no situation where sailors work harder, or are more anxious to get on quickly, than reefing or furling in bad weather; and when they are a long time over it, the master should not take the word of the mate, but see for himself, and he will find that *something* is wrong, either in gaskets or earings; for very often after the men are on the yard they find no earings in the reef cringle, and the second mate or boatswain will be found in the half-deck with a light, groping for a coil of earing stuff, amongst ropes, oakum, tar, and other combustibles. This is unpardonable, but far too often the case. Owners may provide the best rope, the blocksheaves may be patent, but if no attention is paid to what hardly costs anything but time, all will be useless. Mouseings should also be particularly attend to; the unhooking of some blocks may cause great delay and much trouble. The lee reef-tacle block at the yard-arm, if unhooked in a gale, would make such a combination of twistings and knots as would take a considerable time to unravel, even in a calm. If there is a gasket for each man that goes out to stow a jib, it would be much better than one or two very long ones, for every man is employed at once, and not waiting for the gasket to come to them. The same may be said of the mainyard or any other places where they are necessary. There should also be two spare earings always in each top.

Life-lines on the topsail yards are very requisite, though considered an eye-sore by many; but it is much better to have them to go out by than sliding down the lifts to the earings, as many are often obliged to do. They should be put on about a foot from the lift-hook, and hauled taut while the yard is hoisted; and when the yard is down, they will be very tight, and the lifts will be scarcely anything swiftered towards each other by it. If lower than a foot, some of the men are likely to get their breasts on it, and to press it down on the necks of others who are under it, which is apt to cause the latter to consider it a nuisance; if higher than a foot, it is beyond their reach; the proper height is where it will catch a man's shoulders in falling backward.

Vessels bound round Cape Horn should, as soon as their bad-weather-sails are bent, have them reefed and furled several times in fine weather, when any want of the necessary gear will be made visible. The same precaution should be taken on approaching the Channel in winter. An occasional drill in fine weather would not only be exciting and amusing, but also a much more profitable way of employing the time, than by the ridiculous trifling work that sailors are usually kept at. Many a mast or sail would have been saved if the men had been used to work together, and every seaman will acknowledge that the first operation of reefing, either off Cape Horn or in the Channel, is always a very tedious one. When the yard is trimmed to the wind for reefing, the man at the helm should be told to fancy himself at the weather earing, so that he may keep the sail properly lifting. When the wind is on the quarter, much time is often lost in trying to haul out the reeftacles, without rounding in the weather mainbrace so far as to shake the mainsail. When the weather topsail brace only is checked with a reefed sail, the leech soon becomes taut, and so causes much difficulty in getting out the reeftacles; and even when this is done, it usually takes a long time to reef the sail. Sometimes the mainsail has to be kept shaking, and not unfrequently hauled up altogether. It is very singular that there is usually so much unwillingness to start the topsail sheets, as by doing so the mainsail can be kept properly full, and it will be found in practice (in blowing weather) that the operation of double or close reefing will be much accelerated by clewing up at once. When the wind is on the quarter, the topsail sheets, from their weight, (being usually chain,) and the reduced size of a reefed sail, will come home very easily, much more so than will the main tack and sheet, and starting them will ensure a safe and speedy mode of having a well-reefed sail. When a man makes a hobby of having things to go easy, he is sure to succeed, and there is no doubt that much might be done to lighten the labour of pulling and hauling, and to expedite the operations of reefing and furling; and every seaman will confess that it is most desirable to do so, except those fools who hold the opinion, that everything tending to the comfort of sailors will make them lazy: such men as will make the sweeper take the handle out of his broom, and prevent a man from putting on an oilcoat when it rains. Such opinions are sure to bring their own punishment.

When a trysail is brailed up in a fresh breeze, the securing of it should not be left to a single boy, who may be able to make it properly fast in light winds; it is a job for three or four, and it is quite sickening to see a lad tugging and struggling with a sail for a whole hour, and the rest of the watch looking on. It may happen that, with an increasing breeze, it gets adrift altogether, and is then a job for all hands, if it be not split before they can get it in: in such cases, the mate of the watch richly deserves to be made to pay for it.

When all hands are called, they should not be kept on deck a moment longer than while all hands are required. It is very disheartening to men, when they are convinced by previous experience, that when they are called up from below, there is little hopes of getting down again during that watch. This evil arises from the want of a perfect understanding between the master and chief mate on this head. Sometimes, after the topsail haulyards are belayed and the braces trimmed, the crew are all standing about, waiting for the next orders. One of them, perhaps, comes up to the second mate and asks, "What next?" and the latter, after a few traverses, gets alongside the chief mate and asks, "if there is anything else," and he, as a matter of course, says that he does not know; and thus all are kept waiting for the master to intimate that the watch may go below. Very often he forgets all about it, and the mate, feeling a delicacy in asking him, does not give the order till the master himself has left the deck, and, perhaps, most of the watch have slipped below on "spec." The master orders all hands to be called, and it is as distinctly his province to give the order, "go below the watch," after the all hands work is over. Even the coiling up of ropes should be left to the watch on deck; for, if the watch have to remain up for this at night, as long as the ropes are off the deck, they do not much care how they mix them and throw them on the pins; and when all this is taken out of four hours, it makes their period of rest very small. No thoughtful man will leave this order to the chief mate; for, if it is his watch on deck, he may keep them up longer than he should, in order to assist his own watch in work that might easily be done by themselves. Except in very badly manned ships, when all hands are called they should not be kept up for work that would have been done by the watch, if all hands had not been required for the previous work. They are called to reef or tack ship, and when either of these operations are gone through, they should be sent below, and not be compelled to join the watch on deck, in what is properly the separate duty of the latter.

If this system were adopted with either a good or bad crew, it would be found to operate well; for if they are convinced without a doubt that they can get below again as soon as the necessary work is over, it will materially quicken their movements, as will be seen in many of the old coasters where the men sometimes jump up to tack ship without their trowsers, and are into their hammocks again as soon as the lee forebrace is belayed. But if told that they will get below if they work well and quickly, it will have very little effect upon them, for they all know that the chances against giving satisfaction are nineteen in twenty; and the consequence is, that some may work very hard, and others take it very easy; the latter being in the end as well off as the former. If the master pays no attention to these matters, the mate should, as soon as possible, ask him if he has done with the watch, and tell them to go below accordingly.

In some operations, attention should be paid to the wording of the orders. Suppose it blows fresh, and it is considered necessary to take in the spanker, the mate usually calls out, "Brail up the spanker," the men come and stand about the mizenmast till the word to "brail up," is given; and then, many have to look for the brails, and before they can get in the slack of the leebrails the sail is in a bag over them, and both footbrails get to windward, and the sail may be split before it is gathered in. The order in this case should be, "Man the spanker brails." This trifling change in words has a very different effect; each taking a brail and hauling it taut, all are ready to gather in the sail quickly when the outhaul is slacked away. In the same way, "Man the jib downhaul," is preferable to "haul down the jib." If the latter order is used, the nearest man to the haulyards lets them fly, and running to the downhaul pulls away upon it, and when the sail is about one-third down the stay, he stops short and calls out for more help, usually by the words "more beef." The first order should always be to see everything clear for whatever is to be done, and then ropes can be stretched along for hauling, and others seen clear for running.

Boats, till lately, have been very much neglected on board large vessels, many of which go for years without using one; but the loss of life through inefficiency of boat equipage, has drawn public attention to this point, and renders care and vigilance on the part of the mate necessary. Many inventions for the lowering of boats have been proposed, but they have improved little on the old plan. Perhaps, after all, there is none better than the common way among coasters of launching them through the gangway. Even in fine weather we see that a man-of-war cannot have their boats in the water as quickly as many are likely to imagine, although everything there is supposed to be kept in the most perfect order; a state of things not always the case in merchantmen, where the boats are so seldom used, that the sheaves of the davitt blocks get immoveable, the oars, rowlocks, and tapples are all out of place, and the lowering of a boat in a hurry is a scene of confusion; the falls get jammed before the boat is in the water, and the first roll of the ship smashes in the sides, or perhaps, one fall gets jammed and the other is let go,—the consequence of which may be imagined.

But even when everything is in good order, and boats can be got out in a very short time, if they are required in a hurry, in moderately smooth water it may answer very well to lower and man them with rapidity; but when there is a heavy swell, the case is altered, and, if nothing but speed is attended to, the boat is sure to be smashed. In a seaway nothing should be so hurried as to be incompatible with precision and caution. If the boat to be lowered is to windward, the ship should be brought round while some are clearing it away, so as to have it lowered from the lee side. While lowering, a slip rope should be passed round each tacle to prevent the boat from swinging too far from the ship's side and returning with a crash. When the tacles are unhooked the boat should be hauled towards the waist, in order to keep it clear of the counter; the painter should be passed well forward before lowering. In boarding a ship at sea, it is always best to approach the waist, without reference to the position of the gangway.

In steamers there is very great risk attending the lowering of the boats abaft the paddle-boxes, as they are likely to get broken under the sponsons: in fact, there is nothing more certain to happen if the water is not perfectly smooth. The proper and only safe way of getting those boats over is to lower them on the sponson, pass slip ropes round the fore and after thwarts, unhook the tacles, give the vessel a little headway, and launch with a scope of painter. Although there is nothing better for the tapple than a common cork, yet in case there is not one at hand, it is always well to have a piece of wood to fit the hole made fast to one of the bottom boards, and a wine cork that has tin at both ends, to prevent it from slipping, can be made fast with a lanyard, and answers to the purpose much better than any of the brass inventions that have been patented and lauded by the press. A dozen of those corks may be had for very little, and can be ordered with a smaller ring to fit the lanyard, as the large one for the finger is apt to get crushed. There is nothing better than the iron spur rowlock, as it slues with the oars, and will not break or tear part of the side away if the rower "catches a crab." A number of spare ones may be had for the cost of one set of brass ones; the brass should be used for the sheaves of the tacles, and not in superfluous ornament.

When a man falls overboard in daylight, a hand should be sent aloft immediately to watch the spot where he is struggling, as it is in general just under the surface, which may be seen well from aloft, but found with difficulty from a boat.

Sailors, in general, are very bad boatmen; and a man who, in all other things, may be perfect, is very often next to useless in a boat. This may appear strange, but can be easily explained. It is very possible that he may serve a long apprenticeship without ever being in one, except to get a "shove ashore" from a dingee or a bumboat. He may sail for years between London or Liverpool, and Calcutta or Bombay, without ever seeing a ship's boat in the water; and if an Indiaman requires to lower a boat at St. Helena, there is sometimes a difficulty in getting a sufficient number to man it out of a whole ship's crew. On the other hand, it is in general much easier to make a good sailor out of a landsman than a fisherman or regular boatman. The employment of these is so sedentary, accustomed to heavy clothing, and unused to any other hard work besides rowing occasionally, they altogether become unfitted for the more numerous duties and quicker movements of the sailor. Let not the mate, then, imagine that because he man's a boat with good sailors that they will prove good boatmen; or, where there is a scarcity of hands, if he lights upon a fisherman, that he has gained a prize.

It is a notorious fact, that sailors are bad swimmers, and many of them cannot swim at all; the sea boy early loses his fancy for bathing, as he gets baths enough without undressing, and, in fact, has not the same opportunities for learning to swim that the boy on shore has; and in those climates where it would really be a luxury, he is deterred from going into the water on account of the sharks. Notwithstanding this ignorance of swimming, if a sailor has a swimming belt in his chest or hammock, he is made the subject of ridicule and jest by his shipmates. It would certainly look badly if sailors wore them upon all occasions, but if it were made a necessary part of a man's outfit to be worn in cases of danger or shipwreck, in addition to their own lives, they might be the means of saving many others, as it would impart a confidence to them, and make them cool and energetic in their actions.

In many cases of shipwreck, we have seen what a swimming landsman may do to save life; it is, therefore, very desirable that seamen, who are familiar with such scenes, be all made confident swimmers, so that they might not forget their fellow-creatures, when struggling to save themselves. On the cry of "a man overboard," the men on deck certainly could not leave it, but before coming up, the watch below might put on their life-belts and be ready to man a boat in very rough weather.

Any person can make a life-belt; a few pieces of cork sewn upon canvas, or calico is cheaper, and less liable to damage than the more expensive one filled with air that a nail may render useless. The confidence imparted by wearing a life-belt would make a man stand by a wreck as long as his services were of any use to life or property.

In preparing for an anchorage, the mate's most particular attention should be paid to the chain lockers; for it very often happens that when the chain is wanted, or an extra quantity to be paid out, all hands are kept for hours trying with tacles to get them clear, and a delay in giving chain in time may end in very serious consequences.

When the anchor is "acockbill," before letting go, the usual order is, "stand by the anchor," as the last words only of an order are, in general, heard distinctly, this may be easily mistaken for "let go the anchor," and if so, the result may be imagined. The order in this case should be, "stand clear of the chain," which will answer both purposes. In anchorages at night, there should be a lantern on the foreyard-arm, next to mid-channel. When it is suspended to the "forestay," as is sometimes done, it cannot be seen from vessels ahead if the stay is any thickness, and in large ships the stay is nearly as thick as the lantern, and many times thicker than the breadth of the light itself.

Here, as well as at sea, a block and line should be used for the lantern, for, sooner than go aloft to trim the light, the sailor who has the anchor watch will be contented if it burns at all, and the man who relieves him will not do so because it was not trimmed when he came on deck.

The coloured lights of steamers should be taken in while at anchor.

Taylor's instructions for the management of ships at single anchor, are universally read by mariners, but not so universally understood. It was published in the *Encyclopædia Britannica*, in the last century, and wherever the cable is spoken of, a hemp one is always meant. It is impossible with a chain to swing a ship always with a taut cable, and cackling or leather service are no longer required. It recommends always to sheer a ship to windward, for, if the wind is blowing across the tide, or nearly so, the cable is eased of a great part of the strain by keeping the helm a few spokes down; but it must not be supposed that a ship should be kept always to windward of the anchor, for it is impossible to do so except in a very deep ship, and during the strength of the tide. On the contrary, a ship should, as long as it is practicable, be kept to the leeward of her anchor. If, when blowing hard, she has been kept to windward during the strength of the tide, she should be sheered to leeward as soon as it slackens. In bad holding ground the sheer should be against the rise of the ground, without reference to the wind, as long as the tide runs with any strength. If, on the weather tide, that is, with the wind against the tide, or on the ship's quarter, she forges ahead and brings the buoy on the weather quarter, she is safe enough as long as it can be kept there; but the danger of this position is in case the wind freshens her head may fly off from the wind bringing it on the other quarter, and, in consequence, make a long and dangerous sweep to leeward, therefore, the foretopmast staysail must not be set too soon, and if the yards have been pointed to the wind, the after-yards should be braced round and kept full, so that if the wind does come upon the other quarter they may be pointed.

Sometimes a laden ship will not keep in this position without frequently breaking her sheer, and it is in this case that tending to windward becomes necessary—a very troublesome manœuvre, and one where it is always requisite to have more canvas than the foretopmast staysail. If, when the buoy is on the weather quarter, a sufficient strain has been on the cable to warrant the supposition that the anchor has been slued to leeward, she can be set to windward with the yards and staysails, without coming again astream of the anchor; but if the chain has not been very taut, it is always better to watch a lull, and set her to windward when astream of it. If this cannot be done, and she still keeps ahead of the chain, she may be set to windward, but while there, care must be taken that she does not drop astream of it, and when the lee tide makes, she should at first get a broad sheer to leeward to insure the anchor being drawn properly round, and afterwards sheered to windward, if necessary.

If, while riding on the weather tide and sheered to windward, she forges ahead and brings the buoy on the lee quarter, sufficient canvas must be kept set to keep her ahead of the buoy, lest by dropping astream and falling to leeward, the bight of the chain be thrown round the upper fluke of the anchor. In light winds and slack tides, the anchor is not drawn round at all, therefore care must be taken to swing the vessel always on the same side of it, so that if, while riding on the weather tide she was sheered and tended to windward, it becomes necessary to tend her again to windward when the lee tide ceases—a thing that is very difficult to do; if the wind is much across, she must be shot across the tide to windward, with the main and foretopmast staysails, assisted by the jib and other fore and aft canvas, if necessary, and kept there till the weather tide makes. Except in light winds, it is not always prudent to sight the anchor very often, for in some places it is a chance whether or not it will take hold again, so that all attention should be paid to the tending or swinging. The introduction and general adoption of Porter's patent anchor, (now much improved by Trotman,) is a great relief to the mind of any person in charge of a ship at single anchor, as it cannot be fouled. It has also superior biting qualities, but though a lighter anchor of this description holds as well as a heavier one of the common sort, this is a quality too much calculated upon; for, in some instances it has dragged, where, if it had been the proper weight, it would have held well. It is a quality which economists will encroach upon, and may injure the reputation of the anchor; whereas, if always the same weight as the common one, it would be universally acknowledged that it is superior to all others.

There is no object gained (economy excepted) in having a light anchor, for, with the patent windlass, a stream anchor, or a best bower, comes up with equal speed; and even with a common windlass, the extra weight is only for a few fathoms after the anchor has broken ground, for the slack chain is as easily hove in when to a heavy anchor as when to a light one.

If other vessels happen to drive near, and are likely to come in contact, it is perfectly ridiculous, and just as useless, to resort to abuse and vituperation, threatening law and making allusions in strong language to the stupidity of those in the other ship, instead of both crews working in unison, in order, as much as possible, to avoid damage to either; one thing is certain, that no man will wilfully bring his vessel into contact with another,—and if, at a time when his best exertions are required, he is subjected to and aggravated by abuse, it will not improve the state of affairs in the least. If there was a better feeling than usually exists between the parties in cases of contact, serious damage to ships would be of less frequent occurrence. It would be much more advantageous to both parties, if they worked cheerfully and willingly together, as long as exertions were required for the benefit of either ship, than to stand arguing about who was right and who was wrong, till fear of further damage was past.

In harbour the duties of the chief mate are much more numerous than at sea, and they vary according to the customs of different ports and different ships. In small vessels, where there is only one mate, he is obliged to take care of everything and look after everything, sometimes at sailor's work, sometimes at carpenter's, and not unfrequently at the cook's.

In large ships the responsibility is more divided, and each mate has separate duties, although the chief mate is expected to look after all the rest. The second mate generally attends to the hold and stowage, the manner of doing which and quantity of dunnage must be regulated by the description of cargo and the customs of the port.

As, while in port, things are constantly coming into the ship, independent of cargo, a gangway book (of the form here given) should be kept by the third mate, who always has the care of ship's stores.

Every article that goes out of the ship should be entered as well as what comes in, and the party's name *to* whom it goes or *from* whom it comes. Even those articles that are lost overboard, and those that are lent or sent to be repaired, should be entered, with their date of their leaving the ship, or returning to it.

FORM OF A GANGWAY BOOK.

DATE.	ARTICLE.	TO OR FROM.	PERSON OR PLACE.
June 2, 1855	2 bolts can	from	Garnock and Bibby.
2.........	1 ricker	from	Steele and Co.
3.........	Empty oil jar	to	Hayes and Co.
4.........	3 coils of rope	from	Coltart and Co.
4.........	1 jar of oil	from	Hayes and Co.
5.........	3 marlinspikes	to	The Blacksmith.
5.........	2 topsails, 1 topgallantsail	to	J. and R. Wilson.
6.........	3 marlinspikes	from	The Blacksmith.
6.........	1 scraper	to	Overboard.
7.........	Water funnel	to	The Brig "Dido."
8.........	Water funnel	from	The Brig "Dido."
9.........	2 topsails, 1 topgallantsail	from	J. and R. Wilson.
12.........	Empty tar cask	to	Garnock and Bibby.
13.........	Cask of tar	from	Garnock and Bibby.
14.........	3 buckets	from	Wainright and Son.
15.........	1 bucket	to	Overboard.

RIGGING.

The rigging of a ship can never be taught by books. Such publications as treat of it are only purchased by landsmen and amateurs, who thereby acquire vague, and sometimes very erroneous ideas on the subject, and a very slight knowledge of the meaning of the terms used.

Every mate knows how to rig a topmast or jibboom, and it is as impossible for a person to be competent to take charge of a ship, having merely got by rote the "Examination of a Sea Officer," in the old navigation books, as to rig any spar without being quite familiar with the uses of everything about it. The book that explains the meaning of lanyard, shroud, haulyards, &c., is not appreciated by one who has been twelve months in a ship, and the most elaborate description would not make one unacquainted with them understand their uses. But the taking in or out of lower masts or bowsprit is an operation so unusual, that the mate may never have an opportunity of seeing it done till he has to superintend it himself, therefore a short description of the process is given here.

The shears are taken on board either by parbuckle, small shears, or derrick; the ends laid over the taffrail and lashed together, the lashing being at equal distances from the heels of both. After the lashing is on, the lower parts of the shears are drawn asunder; the upper block is then lashed over the first lashing, and between the shears and the tacle rove, the hauling part coming through the middle sheave to prevent the block from slueing in the strop: the upper or truss tacle is made fast to one of the shear heads, and a smaller tacle or gun tacle purchase is sometimes fixed to the others. Guys, two forward and two aft, are placed on, and the heels securely lashed to the ringbolts and stancheons, having hardwood shoes under them to divide the strain on the deck beams, and to slide them upon when it is necessary to shift their position. It is also very necessary to have the place upon which the shears are to stand properly tommed underneath. A tacle is made fast to each heel and hooked on aft, and hauled taut. The lower block of the large tacle is then hooked forward and taken to the windlass.

If the heads of the shears have a sufficient elevation above the taffrail, they will rise easily by heaving upon the windlass; if not, they can be helped up by a small derrick placed near the ends, or between them. When near the perpendicular, great attention must be paid to the after guys, and when upright the heels may be placed in any position by the heel tacles, and the main tacle brought nearly to the plumb of the mast hole. The height from the rail to the position of the lower block, when the tacle is block and block, is then taken, and the lower block is lashed to the mast alongside, at a less distance from the heel than from the block to the rail, and must be above the part that takes the combings. When the head of the mast is high enough. the trusseltrees top and cap ought to be placed on by the truss tacle, which is afterwards made fast under the top. When the heel of the mast is as high as the rail, the heel tacle of the shears may be hooked on the mast to haul it over the hole, and steady it for lowering till it enters the combings, when they must be removed, and the mast lowered into its place. If the three masts and bowsprit are to be placed by the same pair of shears, the mizenmast is taken in first, the head being abaft the shears, so that they may be slided forward for the mainmast and foremast, then sloped to take in the bowsprit, which is done thus: the large tacle is made fast to the bowsprit outside the distance from the heel to the knightheads, and the truss tacle and guys fast to the outer end. When the bowsprit is well topped up by the truss tacle, if the shears cannot be sufficiently sloped to point the heel, a jibboom, or any other spar, is rigged over the forecastle, the heel lashed, and a tacle on the outer end to haul the heel of the bowsprit out and point it.

It is singular that books on rigging have omitted mention of this spar, for though it is possible to place a bowsprit without it, something of the sort is always necessary when one has to be taken out, as it requires a pull in a direct line to draw the heel clear. For those who have not an opportunity of seeing these operations performed, it would be an amusing and instructive pastime to have model masts and shears, and by them illustrate the above description. A mate seldom has the job of masting a new ship, but the taking out of masts is very often under his superintendence; in this case the shears are hoisted up singly and lashed aloft, and generally remain up till the new mast is taken in. When a top has to be sent up with the mast standing, a block is placed on each side of the masthead, with lines rove through them, passed underneath the toprim, and fast to the after crosstree, with two or three stops between the crosstree and the toprim; it is swayed up abaft the mast, and when the stops are cut, will fall over the masthead by means of a guy made fast previously and led forward. As it may come suddenly down and hurt the man who cuts the stops, a strong rope is fast to the after side of the top, and kept well taut while the stops are cutting, and slacked gently afterwards. This operation will be better understood by practising on a model than by the most elaborate description; it is much better to do so in private than to practise for the first time on a real top, to the amusement and ridicule of a whole anchorage. The cap, if heavy, is placed on after the topmast is pointed through the top, or by means of a spar lashed to the masthead and separated therefrom by a chock or wedge the thickness of the cap.

In placing the rigging on the masthead, care must be taken that the bolsters be well parcelled and tarred, and that the seizings are clear of each other; the starboard foremast shroud laid on first, the larboard foremast one next, then the next pair on the starboard side, and so on alternately, and the stay on over all,—not on the top, but outside and close down. If the rigging has been turned in afresh, it is better to set it up by the middle part of the lanyards at first, in order to keep the deadeye square.

When rigging has to be turned in afresh, the shearpoles and lower rattlines must be taken off, and then it must be ascertained by shaking if all the shrouds have an equal strain, and the slackest hove upon till they are all equally taut, and then, instead of measuring the distance from the old marks, a piece of twine is stretched from the foremast to the after shroud, parallel with the rail, and close to the ends of the rigging, above the end seizing; each shroud is marked in the wake of the twine, and from this mark *down* is measured an equal distance on each shroud for the lower part of the deadeye, for, if the distance is measured from the old seizing, and the deadeyes have not been turned in fair at first, they cannot be fair a second time, but by measuring from a mark above, they can all be made parallel to the rail, no matter how zigzag they have been turned in before. However, it may be well to measure from both, and observe the difference.

It is a very common error with some, after having the rigging set up, to clap a nipper on the end of the shroud, and square the quarter seizing. Many vessels have been dismasted through this cause, for the seizing must give a little, but quite enough to throw all the strain upon the throat, and, consequently, endanger the mast. If the seizing must be squared, a runner and tacle should be got upon the end, which must be hove upon till the quarter seizing is rather past the square; it may then be taken off and passed tighter. In the opinion of many a very square seizing is not ship-shape, as it clearly shews that there is no strain upon it, and is almost inseparable from the idea of a stranded throat seizing. The best way to have rigging turned in well is to let one man do it all, for it is the want of practice that makes it such a difficult job; it will be found that a man will improve as he goes along, particularly when he is not hurried over it by trying to have his deadeye finished before another who is working at the opposite shroud. It may be well to encourage a little rivalry where despatch is required, but it is injudicious in this particular case, for it must not be expected of a man who has not turned in a deadeye for two or three years to finish one as well and as quickly as another who may have been at the job a few weeks before; and rather than take off a few turns of a seizing, in order to pass them better, he will hurry over it and finish it badly, lest he should not have it done in a reasonable time; whereas, if all is left to himself, he will turn them in more carefully, and, if he improves as he goes along, will not be satisfied if he is not allowed to go over the first ones again; but if there is a man to each deadeye, after all are finished, if one has to be taken out and turned in afresh, it is considered insulting to the seamanship of the man who worked at it.

The rigging of topmasts, jibbooms, and the minor spars of a ship need not be mentioned, as they are quite familiar to every person who has been one year at sea; however, the plan adopted in some ships of having the topgallant and royal backstays *singly*, with eyes like the stay, may be recommended in preference to the horseshoe, for, though there are two eyes on the masthead, yet when well fitted they do not look so clumsy as the horseshoe, and are much safer, for it is a very common occurrence for backstays to be stranded in the nip of the grummet or seizing. Those who imagine that they will look badly, if single, have only to give the plan a trial to find themselves mistaken.

The plan adopted of late years of slinging the lower yards abaft the heel of the topmast, instead of to the fore part of the toprim, is very much to be recommended, as the yard will swing upon one centre, and not upon two as in the latter case, for, in bracing sharp up, the slings (when to the toprim) hold against the braces, and the yard must rise to be got sharp up.

In large ships, two jibs upon the jibboom, instead of one large one, may, for obvious reasons, be also recommended.

In working ship, when there are extra mainbraces leading forward to the after part of the foretop, in order to prevent confusion and to simplify the orders, they should be crossed aloft, viz., the hauling part of the starboard brace is rove through the block on the port side of the foretoprim, and the port brace through the starboard block, then when the yard is to be braced up, instead of ordering the men to haul upon the lee after brace and the weather extra or preventer brace, nothing more is required than "lee braces," and when the yard is to be squared, "weather braces:" sailors in general run to leeward to brace up, and to windward to square the yards. It will also be found convenient to have the mizentopsail braces crossed in the same manner, so that, whether in squaring or bracing up, they may be all slacked away on the same side, and hauled upon on the same side also, the slacking being attended to by the same person, and thus gaining a hand at the other side. It might appear awkward at first, but not near so much so as the braces of a brig appear to one brought up in a ship or a barque; for, tacking ship will appear to him a scene of great confusion. To a person standing on the weather side of the quarterdeck the crew are invisible, being at the braces—the lee side of the galley: when the mainyard is round, there is a rush to the fore braces, and instead of merely going along the lee side, as in a ship, they have to come along the weather side, and go round to the lee side of the mainmast, stumbling over the after hatch and pump brakes, and the second mate, or whoever slacks away, has to pass round the contrary way, brushing past them one by one, in order to get to the weather braces; some of them, perhaps, go round by the foremast, or, if both galley doors are open, bolt right through it, knocking down some of the saucepans in the transit, which causes the cook to drop the foresheet and run to see what is the matter. This confusion of crossing the decks might be avoided by crossing the braces, so that the yards might be braced up or squared on the same side, and it would do away with the necessity of using such a mouthful of orders.

Sometimes old seamen on long voyages talk very much of the ignorance of young men in not knowing certain jobs of rigging, now almost exploded, and are apt to cause much uneasiness to young mates, who imagine that these jobs are among the difficulties of their calling yet to be learnt; but they are generally very trifling; perhaps some knot, a mere variation or combination of the "wall," "crown," or "Matthew Walker," to which is given another name, or it may be the slinging of a nunbuoy, now seldom used in large ships: this has only to be seen in order to know all about it, being nothing more than a series of short splices. It may be done in two ways, one by fitting grummets something less than one-third from each end; to each, at equal distances, are spliced both ends of two pieces of rope, forming four legs to each grummet, the bights reaching past the opposite end *under* the opposite grummet, the bights hove taut, seized and marled together form the eye at each end. The other and far more usual way of fitting them may be explained thus: suppose a nunbuoy, fitted as above, with four legs from each eye to a grummet on the opposite side; if both grummets are taken away and each leg spliced into the opposite one exactly at the place where the grummet has been, and that leg spliced into the next one opposite, it will be seen that the grummets are not necessary, and that a snaking is formed between the quarters of the buoy. However, seeing one is all that is necessary; it has here been described, because it is one of those things with which old sailors taunt the young ones who are ignorant on this head, for the best reason—that it is no longer used. Grafting and hitching are very much going out of fashion, and properly so, for they are not worth the trouble and time lost upon them, and after all they do not look better than neat worming or good service. In passing from ship to ship in a dock or along a line of quays, it will be seen how little they improve the appearance of rigging, and are seldom seen but in old ships, where the quantity of rigging grafted or covered with canvas brings to mind the number of afternoon watches that all hands have been kept up to finish what adds nothing to the appearance of the vessel, and what at best is considered frippery.

A double Spanish burton is a whip upon a luff tacle, with the standing part of the whip fast to the lower block along with the standing part of the tacle. Usually both standing parts are formed by the bight, which is toggled in the becket of the lower block, like the common or single burton, which is a whip upon a whip, with both standing parts fast together at the hook.

It is a very difficult matter to know good rope from indifferent. Sometimes very inferior material gets a good lay and polish, and may deceive the best judges, so much so, that an act of Parliament (in the reign of Elizabeth) was considered necessary for avoiding deception in cordage, which was remodelled in the reign of Geo. III, when it was enacted, that all inferior material should be *tallied*, and if cable laid, three yarns to be turned the contrary way in each strand, and if hawser laid (now called shroud laid or right handed, *i.e.* common rope,) one yarn to be turned the contrary way in each strand from end to end. It also prohibited any cable or hawser exceeding seven inches to be made of half clean or damaged hemp, under a penalty of four times its value. The fact of these restrictions being necessary, shews that there is much difficulty in knowing staple from half clean or chucking; the terms of the above act are seldom complied with, as few ropemakers will acknowledge using any other than staple. Even length of fibre is no criterion to judge by, for Riga rhine or clean, which is the very best, has not such a long fibre as some inferior sorts; however, the best is generally the finest, and when untarred has no smell, so that good rope should have no other smell than that of the pure tar, and ought not to have much of it, for it is sometimes put in large quantities with rosin in order to give more weight to the cordage. Although much depends on the stuff, the laying up of the rope is a very important matter. The yarns should be quite even throughout, and the fibres of the hemp parallel to each other, not in lumps and in some places across and round the yarn, while in others nearly straight. Hemp is a species of nettle, with an outward fibre like flax, and found principally in Russia and Sweden.

New rigging should not be set up too much at a time, but ought to be brought down gradually, and after eight or ten months should be lifted off the masthead and served and parcelled over again: this is often neglected, and vessels lose their masts in consequence.

The most approved of method for rattling is, after the rigging is properly sparred and swiftered, to begin at the sheer pole and work UPWARDS, and on the starboard side to put the first seizing of the rattline aft, and on the port side to begin forward, which makes the itches righthanded, which are formed on the shroud, before the other end is cut, and before cutting the man should call out that he is ready to do so, that the mate may (by going to the opposite side of the deck or rail) be satisfied that it is properly put on. After rigging has been newly rattled, the spars should not be taken away till the tar about the hitches is well set.

The *size* of rope is the number of inches that it measures in *circumference*, and of chain the *diameter* of the bar from which the link is formed; wire rigging is also measured by its diameter.

Good rope of 4½ or 5-inch will bear as heavy a strain as chain of ½-inch; the rope will weigh about 5 lbs. per fathom, and the chain 14 lbs. per fathom: 10½-inch cable will bear as heavy a strain as 1-inch chain, the hemp weighing 22 lbs. and the chain 56 lbs. to the fathom.* These proportions, though not always accurate, are nearly so, and may serve for calculations of the intermediate sizes.

The manner in which studdingsail gear is marked should be written on a paper and pasted on the back of the sailroom door, or in the mate's room, so that it may be referred to when there is a doubt about a rope. In most vessels, the fore guy, inner haulyards, and outhaul of the lower studdingsail are single ropes, with a hook spliced in one end; and, as there is not much difference in length or size, they may be mistaken one for the other, they are usually marked by the number of whippings on the end. But as these are not easily felt at night, and likely to be worn off, some more lasting and palpable mark should be used, such as a single hook in the fore guy, a pair of cliphooks in the outhaul, the same in the inner haulyards, with the ends of the splice at the hooks formed into a wall knot. The foretopmast, topgallant and royal studdingsail haulyards may have each a strip of leather run through the strands near both ends of each, and their tacks marked by blue cloth or bunting. The haulyards of the after studdingsails may be marked by red, and the tacks by white cloth or bunting, the port and starboard tacks, or haulyards, may be marked alike, as they may occasionally change places.

This system of marking the tacks will prevent the necessity of carrying them coiled like a magpie's nest on the yard-arm, which, besides being unsightly, sometimes causes delay (before both parts are clear of turns) in the dark.

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* In this weight the studs are not included.

Blocks of studdingsail gear may be painted different colours, as they are seldom in their places while in port. However, whatever way they are marked should be written down, so that it may not be forgotten. A little attention to this matter prevents confusion and delay at night, and in a very short time every one on board will become familiar with their distinguishing marks.

* The shackles of the chain cables should be painted different colours, say red and white, or red, white and green, alternately. This is very easily done, and may save much trouble, and serves to shew to a certainty what quantity of chain is out.

It has many times happened that by mistaking the fifteen for the thirty fathom shackle, the anchor has been tripped and the vessel driving before canvas could be got upon her.

Marking by small rings on the shackles is not a good plan, as they are always broken off, whereas paint will be seen easily, and, though soon rusted, its colour will be visible for a long time.

On shipboard, when ropes are spoken of or booked, it is always better to class them, not by their circumference, but by the number of yarns in the *strand*, being a much surer way of knowing a particular coil, even in the dark, as it is not easy to calculate the circumference of a rope by the eye. In this way any person may be sent for five or six fathoms of any coil without mistaking the rope.

A coil of "nines" means a rope with twenty-seven yarns in all; "sixes" eighteen yarns in all, being named according to the number of yarns in each strand, speaking of course of three stranded rope.

There are times at night when the mate of the deck cannot go below, and must leave the cutting of the rope to some one else, who cannot make a mistake if the yarns in the end of the strand are counted, but, if told to cut a 3-inch rope, may cut into a 2½, or 3½, or 4-inch rope.

The cordage book, a form of which is here given, should be kept by the boatswain, and the first pages should contain an inventory of the new rope put on board at the commencement of the voyage, and one of the pages should contain the lengths of all the ropes in the ship, in order to prevent waste in cutting them.

The expenditure of stores, of all sorts, is too often entered only in the log, which makes it difficult to refer to the quantity used, and, in turning back the leaves of the log-book hurriedly, the entries may escape notice in a full page of "remarks," which, consequently, leads to the supposition that there is more than what there remains in reality—a mistake that may not be found out till the consequence is serious.

There are few seamen who have not experienced how suddenly and unexpectedly the different kinds of stores are "run out" in a ship, in general being used in profusion, till it is found that there is not sufficient for the voyage. This is the consequence of keeping no other account of their expenditure than by the entries made in the log-book, and even there they are often unnoticed, if the part of the page allotted to "remarks" is filled up with other matters.

Keeping account of everything separately serves to shew at a glance what has been used and what remains, thereby preventing waste of what may be very valuable property.

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* The pins for keeping the bolts in the shackles should not be made of iron but of wood, so that they may be driven out at any time by a blow from a hammer; iron pins rust in the holes, and render it a matter of difficulty to unshackle the chain in a hurry. In those cases, of very frequent occurrence, where vessels drive ashore from their anchorage, either through parting their chains, or bad holding ground, it will be found that they either have to heave in the chain, or haul up and pay out the whole of it, instead of unshackling it abaft the windlass, and getting under canvas immediately.

FORM OF A CORDAGE BOOK.

EXPENDITURE OF CORDAGE IN THE SHIP ———

DATE.		FATHOMS.	SIZE.	USE.	OLD ROPE, HOW USED.
Jan.	6th.........	40	" 16 "	Forebraces.	Foreguys and forebowlines.
	10th.........	22	" 9 "	Topgallant stud-sail haulyards.	Spar and water cask lashings.
	12th	19	" 20 "	Mizen throat haulyards.	Single flyingjib sheets.
	26th.........	6	" 4 "	Three new rattlines in fore rigging.	Rounding.
Feb.	2nd.........	14	" 18 "	Jib sheets.	Laid past for light weather.
	11th.........	16	" 14 "	Boom brace whip.	Starboard inner haulyards.
	18th.........	5	" 8 "	Three spare earings.	Nil.
	22nd.........	3	" 28 "	Backstay lanyard.	Drawn for yarns.
	28th.........	14	" 12 "	Mizenbrails.	Rounding for the swifters.
March	4th.........	7	" 18 "	Topmast stud-sail sheet.	Galley lashing.
	7th.........	½	" 16 "	Clews of foreroyal.	Useless.
	8th.........	30	" 16 "	Mizen outhaul.	Anchor lashings.
	13th.........	30	" 18 "	Mainbrace.	Rope fenders.
	14th.........	17	" 9 "	Watch tacle.	Rounding for topmast rigging.
	19th.........	3	" 9 "	Lanyard for drawbucket.	Lost overboard.

THE OPERATION OF HEAVING A SHIP DOWN.

In heaving a ship down everything must be removed that will not be required for the operation, either to other vessels or ashore; the topsides well caulked on the side to be hove down, the masts fished and shored from the water-way by two spars shear-fashion, well secured at the masthead; shores also may be put under the deck to take the strain off the partners on the opposite side to that to be hove out. As much preventive rigging as is thought necessary must be got up, and if it is expected that the vessel will be difficult to heave down, one or two outriggers may be got out at each mast across the gunwale, (the lower plank of the bulwarks may be taken out for that purpose,) with martingales down to bolts driven in the side as low as possible, or completely round the keel and fast the other side. Stays must be got from the outrigger ends to the mast-head, the purchase blocks secured aloft by two long lashing-eyes, the eyes coming round, and lashing on the same side as the block. Nothing can be too well secured, and after the rigging and preventers are well and equally set up, the shores must be wedged up till a little strain is taken off the rigging. Stages, stage-ropes, oakum, and everything the carpenters will require, must be all ready beforehand, and in reeving the falls smaller rope may be tailed on for the first part of the heave. The pumps must be taken out and put down the hatchways to the bilges; if spare ones can be had, it is better to let the others remain in their places; pieces of plank should be nailed over felt or canvas on the bulls'-eyes of the deck.

When everything is ready for heaving down, the vessel must be moored head and stern, and an anchor or two laid off on the side to be hove out, the hawsers or stream-chains from which must be passed under the bottom and fastened to the side to be hove down; this will keep the vessel from closing in on the one she is to be hove down to, and will save much heaving. Both vessels must be moored parallel to each other, and their breasting off anchors, for obvious reasons, in opposite directions.

In some places there are heaving down hulks always ready, but if another vessel is used, some caution is necessary in preparing a place for the lower block, as in ordinary vessels there is nothing about the deck that will bear such a strain.

If the vessel has hatchways opposite the mastheads of the vessel to be hove down, a spar under the lower deck-beams, well secured with diagonal shores, is used for the lower block; if the vessel is much smaller, the strop for the foremost block is passed through the hawseholes and round the cutwater, and the after one in the hatchway, as above described. Particular care must be taken that the distance of the lower blocks be exactly the same as that of the upper ones; for, when nearly hove down, it might be necessary to ease up on account of the unequal strain on the preventive shrouds. If the vessel be small, a chain passed completely round her will be the best way to secure the lower block.

The fall may be led to the capstan or windlass, as best it may suggest itself at the time, and if the strain is heavy, particular care must be taken in surging. While every precaution is taken for a heavy heave, it must not be forgotten that some ships of a peculiar build may fall over after arriving at a certain inclination; if this is suspected, tacles must be got to the mastheads of the other vessel, ready for use if necessary, which may be easily known by the lightness of the heave. When the vessel is down, preventers must be passed round the masthead, and the tacles eased of the strain. While the ship should be kept in that position no longer than absolutely necessary, every care should be taken, and every precaution used, to stop leaks and effectively repair damages; for it would be a serious matter if such a troublesome, tedious, and expensive operation turned out to be of no permanent advantage.

TACLES.

The different kind of tacles used on board ship are all subject to the same laws as the other mechanical powers,—viz. "where speed is gained, power is lost, and *vice versâ;* and where a small power is used to balance a greater, it must move through more space than the other does, by as many times as it is contained in the greater."

Suppose a gin or single block to be hooked aloft, and a line rove through it, then, to balance a weight of five pounds hooked on to the end, will require a weight of five pounds on the other part; the one rising as the other falls, and both moving through equal spaces, no power is gained, as it requires an equal weight to balance it. If the hauling part be taken to a winch, it is obvious that to weigh five pounds an equal strain is put on the winch, and, consequently, a strain of ten pounds on the gin aloft, or double the weight to be lifted, whether by a winch or by hand. Accidents have often happened through ignorance of this, for many, knowing that their gin is strong enough to lift two tons, never consider that to lift it a strain of four tons is put on the gin, and if it breaks it has not the credit of standing more strain than two tons. In reality it has to bear *more* than four tons, for, though two tons' strain on the winch is sufficient to *balance* two tons weight, considerable more power is required to *hoist* it, that is, to overcome the balance.

A single "whip" has equal powers at each part, and a strain at the block equal to double the weight to be lifted.

A "guntacle" doubles the power, for, if the standing part of a whip be rove through a block and made fast aloft, and the lower block hooked to a weight of ten pounds, it is evident that each part at the lower block bears a strain of five pounds, and each part at the upper block bears also a strain of five pounds, therefore a strain on the winch of five pounds will balance a weight of ten pounds at the lower block, and put a strain of fifteen pounds on the upper block, if the standing part is fast to it; this, of course, supposes that there is no friction, stiffness in the ropes, or weight in the blocks.*

A "lufftacle," or double and single block, with a weight of fifteen pounds on the lower block, has a strain of five pounds on the winch and twenty pounds on the upper block, which has always to bear the weight lifted and the strain used in doing so.

A "fishtacle," or two double blocks, with twenty pounds on the lower block, has a strain of five pounds on the winch and twenty-five on the upper block, the lower block having the same strain as the upper one of the luff-tacle.

A "cattacle," or treble and double blocks, with a weight of twenty-five pounds on the lower block, has a strain on the winch of five pounds, and thirty on the upper block.

A "whip upon whip," with a weight of ten pounds on the standing part, has a strain of five pounds on the winch and twenty on the upper block, therefore if the weight is to be applied to the standing part, it is equal to the guntacle; but if to the upper block, it is equal to the lufftacle.

A "burton," or both standing parts of the "whip upon whip" brought together to the same hook, with a strain of fifteen pounds on the hook, has a strain of five pounds on the winch and twenty on the upper block, having the same power as the lufftacle, but less friction, as the rope has only to pass over two sheaves, and the weight of the lower block is not added to the weight to be raised, so that the burton has a tendency to round itself up while the lufftacle has a tendency to overhaul.

It will be seen that the power or weight applied to the end of the hauling part of the whip upon whip, has, like the guntacle, to move through twice the space that the weight is lifted, and the hauling part of the burton, like that of the lufftacle, has to move three times the distance.

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* This is not the case in reality; from experiments, it is found that the strain on the parts varies nearly as their respective velocities

A "Spanish burton," which is a lufftacle with a whip on the hauling part, and the standing part of the whip fast to the lower block along with the standing part of the tacle, with a strain of five pounds on the winch, will balance a weight of thirty-five pounds on the lower, and throw a strain of forty pounds on the upper block; the same power is produced by a lufftacle on a whip, if the standing part is fast to the lower block.

A "runner and tacle," commonly used in setting up rigging, with five pounds on the winch, will heave a strain of thirty pounds on the runner block, supposing the double block of a lufftacle hooked aloft.

"Luff-upon-luff," with the double block of the standing luff down and the double block of the running luff aloft, with a strain of five pounds on the winch, will put a strain of sixty pounds on the double block of the standing luff.

No power is gained by increasing the size of the sneave, which may be considered as a scale beam, that, whether long or short, will require an equal weight at both ends; but it differs from the scale beam in this, that if two equal weights are hung on each end of a rope passed over a sheave, they will not find the same level, but the lowest having an additional weight of rope on its side of the sheave, will have a tendency to round the other up.

Sheaves are used to overcome friction, for, supposing the circumference of the sheave to be twelve inches, and the pin upon which it revolves to be one inch in circumference, it is evident that a rope passed over the sheave will move through a space of twelve inches, and the friction will be only over the space of one inch; therefore, by increasing the size of the sheave as much as convenient, the friction is diminished.

The spread of ropes has a very great effect on their power, which diminishes as the angle made with the direct line of action increases; thus, if a rope is rove through a single block, and one end taken to a winch, and the standing part close to the winch, a strain of five pounds on the winch will throw a strain of ten pounds on the block, but if the standing part is taken to a distance, so that the parts at the block are at right angles to each other, although the standing part and that at the winch will each still have a strain of five pounds, the block will only have a strain of seven pounds. By increasing the angle to 120 degrees, the block will only have the same strain as the winch. If the rope is in a straight line, the block will, of course, have no strain at all, therefore the more obtuse the angle the better for leading blocks, and the more acute where power is to be applied.

The bolts in the deck, through which the topsail sheets are rove, have double the strain of the sheets if the end is taken up and belayed to the mast, and the blocks on the quarter of the yard, where the sheets make right angles, have two-fifths more strain than the sheet; this supposes the strain to be equal from the clew to the deck.

If ropes from two mastheads[*] make a right angle with each other, and a rope is made fast to it, then, seven pounds on this rope will put a strain of five pounds on each of the others, and if the span be tightened so as to make the angle 120 degrees, seven pounds on one will throw seven pounds on each of the others, therefore, when a weight is fast to two ropes of equal length, except they are close together, each bears more than half the strain. This should be borne in mind when mooring with two chain cables, for, when they are at right angles to each other, they are together only three-sevenths stronger than one right ahead, and if they are tightened till they have an angle of 10¾ points, they are together only as strong as one cable ahead.

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[*] If the span for discharging cargo be formed by the topsail tie, the sheave at the masthead should be wedged up to prevent the pin sinking in the wood.

MAKING AND REPAIRING SAILS.

In many ships, where there is no sailmaker, it is expected that the mate can superintend the repairs of the sails, and, if circumstances require it, the making of new ones. It is often a source of great mortification to young mates to be deficient in this branch of nautical knowledge, not that there is any difficulty in the thing itself, but the ignorance of a few simple rules may lead to very great mistakes. Here, as well as in many other cases, the young mate is apt to fall into the common error of letting it be taken for granted that he knows all about it, supposing that he can learn without letting it be seen that he is only a beginner, and in doing so many a piece of new canvas is thrown overboard privately, after being spoiled or cut too short. He should in this, as well as in all other cases, enquire about every trifle from those who are competent to tell him, before he undertakes to manage it himself. If, in his night watches, he occasionally asked himself what he is deficient in or ignorant of, and noted it to be learnt as soon as possible, instead of waiting till it came before him, a great many mortifications would be avoided.

The following rules and observations may not be correct, according to the opinions of professed sailmakers, but are generally practised on board ship, and, by adopting them, the mate cannot go far wrong in practice.

The only thing that requires long practice to perfect is the sewing. Seams must be sewn firmly, evenly, and quickly; to do this, it is absolutely necessary that the palm should be a perfect fit to the hand.

The distance of the stitches must be regulated according to the strength and quality of the canvas.* With good new canvas, the stitches are about five to the inch, or between sixty and seventy to the foot, but weak or old canvas does not require so many.

In sewing old and new canvas together, the new must be turned in, or, in other words, the round seam or tabling must be in the new canvas, and when both are hooked on the sailhook, the old must be kept next the person sewing, and more or less slack than the new, according to its age or difference of strength.

Seams are generally sewn from the foot towards the head, and in fore and aft sails the round seam is in the after cloth.

In strong canvas, two round seams are much better than a round and a flat one.

When the stitches of a seam are chafed or broken, it is much better to run a straight seam along them than to rip them out and sew them over again, for this weakens the selvage, and by the help of the straight seam the old stitches hold much better.

Middle stitching or snaking is of very little use; it is much better to put two side stitches in each seam when the sail is half worn.

In sewing on bolt rope very great attention must be paid to the slack, more being taken in in square than fore and aft sails, and those who are not well practised should run a piece of chalk along the rope, which would prevent them from sewing the canvas round it.

There ought to be three or four cross stitches at every seam, and at the middle of the cloth in the head of the sail.

Bolt rope must be sewn on the after side of square, and on the larboard side of fore and aft sails.

The foot rope of a topsail or course must be served slack, so that the marling hitches may be got between the turns of the spunyarn.

* Sailors generally take too much hold of the canvas.

Tablings and clew patches must be on the after side of square sails, and on the larboard side of fore and aft sails.

Lining and buntline cloths must be on the fore, and top lining on the after side of square sails.

Grummets for eyelet-holes are sewn on the same side as the rope, and reef-points are sewn to the upper part of the grummet in square, and the lower part in fore and aft sails. Lining and buntline cloths should be sewn on slack.

The quantity of canvas in a square sail is found by adding together the number of cloths in the head and foot, and multiplying half the sum by the depth of the middle cloth, to which must be added the quantity in the linings, bands, and pieces, also the quantity in foot-gores when the foot is cut hollow.

The quantity in the foot-gores is found by multiplying the depth of the roach by the number of gored cloths on one side of the sail.

The quantity of canvas in jibs and staysails is found by subtracting the sum of the depths of the gores at the foot from the sum of the depths of the gores at the stay, and multiplying the remainder by half the number of cloths in the foot; this supposes the foot and stay to be straight.

The most simple way of finding the quantity of canvas in a jib, or any triangular sail, is to take the length of the luff and add to it the number of seams multiplied by the breadth of the seams; this, multiplied by half the breadth across the sail, (the nearest distance from the clew to the luff,) increased by the number of seams, will give the quantity in the sail.

If the foot is cut with a sweep, its breadth increased by the number of seams, multiplied by the depth of the sweep, will give a little more than the quantity contained in it; and when the measurement is in feet, it must be divided by six to bring it to yards, as there are six square feet in a yard of canvas two feet wide.

The quantity of canvas in trysails and staysails with a fore-leech is found by adding together the number of cloths in the head and foot, and halving the sum to make it square, and multiplying this by half the sum of the after-leech and the seam next the throat.

The sweep of the foot is found in the same manner as that of the jib.

None of the above rules are strictly correct, but sufficiently so for making out estimates, and sailmakers furnish their bills by the quantity of canvas used, found by what remains after making the sail.

It is always the better plan before cutting the canvas to make a draught of the sail.

The plan of a square sail is made by first drawing a line to represent the depth of the sail, taken from a scale, and at right angles to this line the head and foot are drawn, and their extremities joined. If the foot is to be roached, the height is marked on the midship line, and a curve drawn through it from the clews; or, if there are to be any square cloths in the foot, a line must be drawn across the height of the roach on the midship line of the length of the number of square cloths, and from each extremity a curve is drawn to the clew.

A regular curve is drawn through any three points by first joining them by straight lines, bisecting these lines by perpendiculars, the intersection of which is the centre of a circle which will pass through the points.

In topsails the leeches are sometimes roached to avoid an inconvenient length of yardarm for the reefs. After the outline is drawn, it must be divided into cloths, from which the canvas is cut according to the scale of dimensions.

The plan of a jib is made by taking the lengths of the three sides and making the necessary curve to the foot, by laying off the depth and drawing the arc of a circle through it from the tack to the clew, and dividing the plan into cloths.

The plan of a trysail is made by taking the lengths of the head, luff, foot and leech; and also the length from the throat to the sheet cringle, called the length of the cross gore, which is used to keep the four sides of the figure in proper shape.

Many ridiculous mistakes are made by persons who imagine that they have all the necessary dimensions in the four sides, never thinking that it may be put out of shape by increasing or decreasing the distance of the opposite corners.

When the canvas is twenty-four inches wide, and when calculating the number of cloths required for a certain width, it must be remembered that the breadth of a seam is to be taken off all the cloths, except one, as the number of seams is always less than the number of cloths by one; therefore, if the width is in feet, instead of dividing by two, it must be multiplied by a fraction something greater than $\frac{1}{2}$, such as $\frac{5}{9}$ $\frac{6}{11}$ or $\frac{7}{13}$, according to the breadth of the seam.

It will be found that in cutting the canvas for the plan, one gore cuts another without waste.

It is necessary to remember when cutting gores, that the long selvage of a gored cloth must be longer than the selvage to which it is sewn, for the width of the seam will require the selvage of the gore to go higher up, according to the depth of the gore; this extra length is taken by sailmakers from a table, which is nothing more than a traverse table; it can, therefore, be taken with equal precision from any navigation book, thus—

With the depth of the gore in inches, and the width of the canvas (24 inches) as difference of latitude and departure, the length of the gore is found in the distance column, and in the same page, corresponding to the width of the seam, in the departure column, the extra length of the selvage is found as difference of latitude.

In like manner, any question relative to right-angled triangles can be solved by the traverse table.

The quantity of peak in trysails or drivers is altogether according to taste. To have much peak is no advantage to the sailing of a vessel on a wind, but it looks better and throws more strain on the throat than on the peak haulyards,—a very desirable thing in a small craft, with little or no support to the masthead above the rigging.

Particular attention should be paid to the sail-lockers, which must be kept dry and aired, and the bottoms and sides occasionally examined for rat-holes.

The bottoms should have moveable gratings to keep the sails from the deck, and all cringles, with iron thimbles, should be parcelled before they are stowed away.

When bending a new sail it is a common and very erroneous practice to stretch it as much as it will bear; this, particularly in a fore and aft sail, is sure to put it out of shape, and is likely to tear it, if it gets a shower shortly afterwards, so that it is much better to draw a sail out gradually.

In bending square sails much trouble might be saved by having a midship cringle in the head, which can be made fast in the bunt before the earings are hauled out, which will insure the sail to be bent fair, without any trouble; for, if a sailor at an earing is asked to slack away what he has got in, he parts with it very reluctantly, and may cause delay and much dissatisfaction at the other yardarm.

The quantity of canvas used in a ship is kept in a book of the accompanying form:—

FORM OF A CANVAS BOOK.

EXPENDITURE OF CANVAS IN THE SHIP————

DATE.	YARDS.	NO.	USE.	CUT BY*
1854. Jan. 3rd...	8	" 5 "	Repair foretopgallantsail.	J. T.
5th...	3	" 7 "	Repair mainroyal.	J. T.
10th...	20	" 8 "	New boatsail.	W. F.
13th...	12	" 4 "	Repair of jib.	J. T.
13th...	16	" 3 "	Repair maintopsail.	J. T.
16th...	1	" 8 "	Dough bags for cook.	W. F.
17th...	½	" 3 "	Clew patch for mizen.	S. M.
20th...	60	" 5 "	After awning.	J. T.
22nd...	15	" 4 "	Repair forecastle awning.	W. F.
24th...	6	" 5 "	Tarpaulin for skylight.	J. T.
Feb. 9th...	7	" 2 "	Repair of mainsail.	J. T.
14th..	11	" 1 "	Mainstaysail.	J. T.
24th..	3	" 2 "	Mainsail.	J. T.
27th...	2	" 6 "	Topgallant studdingsail.	W. F.
March 6th...	4	" 8 "	Fore skysail.	W. F.
11th...	2	" 7 "	Cover for bell.	W. F.
12th...	2	" 8 "	Signal bag.	J. T.
24th...	12	" 3 "	Repair foretopsail.	W. F.
April 4th...	6	" 6 "	Repair of flying jib.	J. T.
10th...	10	" 1 "	Main Spencer.	W. F.
16th...	6	" 6 "	Cover for wheel.	S. M.
24th...	½	" 7 "	Sail bag.	W. F.

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* As there is nothing on board ship more wasted than canvas, it is not only necessary to know who cuts it, but also that the person who cuts any of a bolt should mark his initials with black lead on the bolt at the last cut, in order to prevent its being cut again, which cannot be done without taking off the initials.

SEA TERMS AND PHRASES OF FOREIGNERS.

There are very few books written for the instruction of seamen that do not contain a vocabulary of sea terms, which is not of the least use to the youngest boy in a ship, for he will very soon get so familiar with them that it will be difficult for him to avoid interlarding his ordinary conversation with technicalities; however, British seamen are in general quite ignorant of the terms used by those of other nations, and, therefore, labour under many difficulties in those cases where there is assistance given to, or required of foreigners. No man requires the knowledge of languages more than the mariner, and a dictionary and grammar of each of the modern languages would take up very little room in a ship's library, and might in some cases be more useful than the charts.

All languages are best learnt by speaking of things in which one is most interested, and as no dictionary contains sea terms, and our own will not bear a literal translation, the following vocabulary will be found useful.

German, though a primitive maritime tongue, is of little use to the Englishman, for most German sailors speak English; and in the sea-ports, either English or French is spoken by most of the inhabitants; and if German is spoken grammatically by a foreigner, he will not be understood by the peasantry.

French will be found a very useful language; though not perhaps the most universally spoken in seaports, it is the most universally *read;* so that an advertisement in French will have more readers in a foreign country than any other language.

Spanish and Italian are the business and maritime languages of the Black Sea, the Mediterranean, and the continent of South America; they are easily acquired, being (unlike the French or English) pronounced as they are written.

Bengalee is useful in the East Indies, and when ships are mostly manned and worked by Lascars, it is much better for the mate to know the language himself, than be obliged to have his orders interpreted through the Serang.

The Bengalee used by the Lascars is not the language of Bengal, and is as unintelligible to the landsman there as our own technicalities are to the servants of an inland farm-yard.

The phrases and terms used on board the East India ships are a mixture of all the tongues spoken along the immense sea-board of India, and also many Portuguese words left amongst them by the earliest navigators of those seas.

A very slight effort of memory will be sufficient to enable a person of ordinary ability to work a ship in any language of the vocabulary.

ITALIAN.	SPANISH.		FRENCH.	BENGALEE.
Vela	Vela	Sail	Voile	Serr
Vela maestra	Vela mayor	Mainsail	Grande voile	Burra serr
Gabbia	Gavia	Maintopsail	Grand hunier	Burra gavee
Pappafico maestro	Juanete mayor	Maintopgallant sail	Grand perroquet	Burra subbur
Contre pappafico maestro	Sobre juanete mayor	Mainroyal	Grand cacatio	Burra tubbur
Trinchetto	Trinquete	Foresail	Misaine	Tirkut
Parochetto	Velacho	Foretopsail	Petit hunier	Tirkut gavee
Pappafico di parochetto	Juanete de proba	Foretopgallantsail	Petit peroquet	Tirkut subbur
Contre pappafico di parochetto	Sobre juanete de proba	Foreroyal	Petit cacatio	Tirkut tubbur
Mezzana	Mesana	Mizen	Artimon	Kulmee (Goosee)
Contra mezzana	Sobre mesana	Mizentopsail	Hunier d'artimon	Kulmee gavee
Caccaro	Juanete de mesana	Mizentopgallantsail	Perruche	Kulmee subbur
Contre caccaro	Sobre juanete de mesana	Mizenroyal	Cacatio d'artimon	Kulmee tubbur
Trinchettina	Trinquetilla	Foretopmaststaysail	Voile d'etai du petit hunier	Tirkut gavee dol suway serr
Carbonari	Vela de estay mayor	Mainstaysail	Grand voile d'etai	Burra suway serr
Vela di pico	Vela de cangreja	Gafftopsail	Voile a corne	Guephul
Vela di straglio di mezzana	Vela de estay de mesana	Mizenstaysail	Voile d'etai d'artimon	Kulmee suway serr
Fiocco	Foque	Jib	Foc	Jeeb
Contra fiocco	Foque chiquito	Flying jib	Clinfoc	Phullan jeeb
Brigantina	Bregantina	Trysail	Brigantine	Kulmee (Goosee)
Randa	Vela de botalon	Spanker	Voile a gui	Drawul
Scopa mare	Rastrera	Lower studdingsail	Bonnette basse	Neechee dustoor
Cortellazza di gabbia	Ala	Topmast studdingsail	Bonnette d'hunier	Gavee dustoor
Cortellazza di pappafico	Ala juanete	Topgallant studdingsail	Bonnette de paroquet	Subbur dustoor
Cortellazza di contre pappafico	Ala de sobre juanete	Royal studdingsail	Bonnette de cacatio	Tubbur dustoor
Albero	Palo	Mast	Mât	Dol

ITALIAN.	SPANISH.		FRENCH.	BENGALEE.
Penono	Verga	Yard	Vergue	Purwan
Boma	Botavarra	Boom	Baume	Boom
Albero maestro	Palo mayor	Mainmast	Grand mat	Burra dol
Albero del trinchetto	Palo de trinquete	Foremast	Mât de mizaine	Tirkut dol
Albero del mezzana	Palo de mesana	Mizenmast	Mât d'artimon	Kulmee dol
Copresso	Beaupres	Bowsprit	Beaupre	Subdurra
Albero della gabbia	Mastelero	Topmast	Mât d'hunier	Gavee dol
Albero del pappafico	Mastelero de juanete	Topgallantmast	Mât de perroquet	Subbur dol
Penono basso	Verga baja	Loweryard	Vergue basse	Neechee purwan
Penono della gabbia	Verga de gavia	Topsailyard	Vergue de hunier	Gavee purwan
Penono del pappafico	Verga de juanete	Topgallantyard	Vergue de perroquet	Subbur purwan
Penono del contre pappafico	Verga de sobre juanete	Royalyard	Vergue de cacatio	Tubbur purwan
Coffa	Cofe	Top	Hune	Panjre
Crocette	Crucetas	Crosstree	Barres traversières	Koorsee
Testa di moro	Tamboretto	Cap	Choquet	Tok
Bertocce	Bertollo	Truck	Pomme du Mât	Topee
Bastone di fiocco	Botalon de foque	Jibboom	Bout de hors	Jeebboom
Bastone di cortalazzo	Botalon de ala	Studdingsailboom	Bout de bonnette	Dustoor boom
Nave	Buque	Ship	Vaisseau, batiment	Juhaz
Coperta	Cubierta	Deck	Pont	Tootuk
Stiva	Bodega	Hold	Cale	Khun
Camera	Camara	Cabin	Chambre	Kamurra
Molinello	Molinete	Windlass	Vireveau	Cheenaee
Argano	Cabrestante	Capstan	Cabestan	Duor
Bitte	Bitas	Bitts	Bittes	Habeet
Bussoli	Aguja, compass	Compass	Boussole	Hooku
Timone	Timon	Helm	Barre	Sookan
Ancore	Ancla	Anchor	Ancre	Nungur
Gomene	Cable	Cable	Cable	Humar

ITALIAN.	SPANISH.		FRENCH.	BENGALEE.
A prua	Por la proa	Forward	Par avant	Agul
A poppa	Por la popa	Aft	Par derriere	Peechul
Allungato	Abretonado	Fore and Aft	Allonges	Agul peechul
A traverso	Al traves	Athwart	A travers	Ara benda
Garlino	Guindaleza	Hawser	Grelin	Chota humar
Destra	Estribor	Starboard	Tribord	Jumina
Sinistra	Babor	Larboard (Port)	Babord	Dawa
Abasso	Abajo	Below	En bas	Neechee
Sopra	Arriba	Aloft	Au haut	Ooper
Basta	Basta	Avast	Bosse	Buss
Sarchié	Obenques	Shrouds	Haubans	Lubran
Straglie	Estay	Stay	Etai	Suway
Patarazzi	Brandales	Backstays	Galhaubans	Furrodee
Briglia	Barbiquejo	Bobstay	Sous barbe	Bawustee
Corridore	Acolladores	Lanyards	Rides	Goora
Paranco	Aparejo	Tacle	Palan	Yaree
Bracee	Braza	Brace	Bras	Brass
Amura	Amura	Tack	Amure	Moora
Scattee	Escota	Sheet	Ecoute	Damun
Drizza	Drizas	Haulyards	Drisse	Hunges
Cargabasso	Cargadera	Downhaul	Carguebas'	Ootara
Sagole	Chafaldete	Clewline	Cargue points	Stingee
Imbrogli	Brioles	Buntlines	Cargue fonds	Batlee
Sagole	Candelizas	Brails	Cargues de voile a gui	Stingee
Paranchinetto di rizze	Palanquin de rizos	Reeftacle	Palanquin de ris	Reef Yaree
Boline	Bolina	Bowline	Bouline	Boolin
Serre	Tomadore	Gasket	Raban de ferlage	Ganseet
Equipaggio	Tripulacion	Crew	Equipage	Juhazee
Capitane	Capitan	Captain	Capitaine	Kuptan, nakhoda
Piloto	Piloto	Mate	Contre maitre	Malum

ITALIAN.	SPANISH.		FRENCH.	BENGALEE.
Nostr'uomo	Contramaestre	Boatswain	Maitre d' equipage	Surang
Veliero	Velero	Sailmaker	Voilier	Serr Seena
Falegname	Carpintero	Carpenter	Charpentie	Mistree
Dispensiere	Despensero	Steward	Depensier	Kitmagar
Cuoco	Cocinero	Cook	Cuisinier	Bandaddi
Marinaro	Marinero	Seaman	Matelot	Kulassee
Garzone	Muchacho	Boy	Mousse	Chokra
Ammerate	Amarra	Belay	Amarrez	Bandha
Largate	Larga	Let go	Dèmarrez	Chordou*
Izzate	Iza	Hoist away	Hissez	Hunkar
Amainate	Arria	Lower away	Amenez	Urrya
Alate	Hala	Haul	Halez	Lug. tan
Poco a poco	Poco a poco	Handsomely	En Garante	Aste aste
Bozza	Basta	Hold on	Tenez	Hoodar
Virate	Vira	Heave away	Virez	Hubes
Filate	Arrea	Slack	Filez	Urrya
Presto	Presto	Bear a hand	Vite	Jeldee
Batello	Bote	Boat	Bâteau	Muchwa
Remo	Ramo	Oar	Rame	Hulesa
Sassola	Bertedor	Bailer	Escop	Panee Nikalna
Chiaro	Clara	Clear	Clair	Saf
Imbrogliato	Enredado	Foul	Embrouille	Gurree purra
Sopravento	Barlovento	Windward	Au vente	W*ou*pur
Sottovento	Sotavento	Leeward	Sous le vent	Bhanee
Arresta	Coge	Catch hold	Saissez	Pukeros
Guardate	Guarda	Look out	A vigie	Chokee
Bene	Bueno	All right	Tout droit	Subuchta hue
Tempesta	Borrasca	Storm	Tempete	Tyfoon
Calma	Calma	Calm	Calme	Kulmurya
Virate dentro il gomena	Vira el cable	Heave away the windlass	Virez au cable	Hubes cheenaee

* Pronounced like *ou* in sound.

ITALIAN.	SPANISH.		FRENCH.	BENGALEE.
Bozzate la gomena	Boza el cable	Clap on the stopper	Bossez le cable	Habeet ke agul bose bandh
E la gomena a pico?	Este a pique el cable?	Is the anchor apeak?	Le cable est il à longue pic?	Nungar peek?
Alate le scotte delle gabbie	Caza a bezer las escotas de gavias	Sheet home the topsails	Bordez les ecoutes des huniers	Champ gavee damun chikar
Issate le gabbie	Iza las gavias	Hoist the topsails	Hissez les huniers	Hukar gavee
Isate i pappafichi	Iza los juanetes	Hoist the topgallant sails	Hissez les perroquets	Hukar subbur
Virate il gomena con forza	Vira el cable confuerza	Heave away again	Virez encore au cable	Hubes jeldee
L'ancora è ciaffatta	El ancla agara	The anchor is aweigh	L'ancre est deplanté	Nungar Utrung
Issate il fiocco	Isa el foque	Hoist the jib	Hissez le foc	Hukar jeeb
Alate il scotte alla bandadritta	Hala la escota a estribor	Haul aft the starboard sheet	Halez l'ecoute a tribord	Jeeb jumina damun tan
Fate portar le vele di proa	Bracea llena las velas de proa	Fill the head sails	Brassez pleine les voiles de l'avant	Bhur agul
Alate il scotte del fiocco dall'altra banda	Hala la escota del foque a la otra banda	Haul over the jib sheet	Halez l'ecoute de foc	Jeeb damun tan chikar
Alate fuori la mezzana	Caza la mesana	Haul out the mizen	Faites servir l'artimon	Goosee damun tan
Caponate l'ancora	Engancha la gata	Cat the anchor	Caponez l'ancre	Ket fal puker lug
Abasso col trinchetto	Abájo el trinquete	Let fall the foresail	Laissez tomber la mesaine	Mel tirkut
Spiegate la vela di maestro	Pon la vela mayor	Set the mainsail	Mettez le grande voile	Mel burra surr
Pronto per bordeggiare	Pronto para virar	Ready about	Prêt pour virer de bord	Tueyar juguh
Il timon a sottovento	El timon a sotavento	Hard alee	Adieu va	Gos *ou*
Molla le scotte	Carga las amures a sobre el bolichi	Raise tacks and sheets	Levez les lofs et debordez les ecoutes	Istingee moora damun
Tira-molla le vele di poppa	Hala del medio	Mainsail haul	Brassez d'arriere	Phir*ou* peechil
Bollini di proa	Bolina de proa	Fore bowline	Bouline d'avant	Boolin agul
Tira-molla le vele diproa	Ala y larga à proa	Let go and haul	Brassez d'avant	Phir*ou* agul
Alate le scotte	Caza las escotas	Aft sheets	Halez les ecoutes	Tan damun
Braccite bene a sottovento	Bracea bien a sotavento	Brace sharp up	Halez ferme les bras de dessous le vent	Lug bras chikar

ITALIAN.	SPANISH.		FRENCH.	BENGALEE.
Allate i bollini	Hala las bolinas	Out bowlines	Halez les boulines	Tan boolin
Bracciate i penoni in croce	Pon las vergas en cruz	Square the yards	Brassez quarre les vergues	Jahom purwan
Il timon a sopravento	A barlovento con el timon	Hard up the helm	La barre au vent	Damun *jou**
Dirigete il timone	En el medio con la cana	Steady the helm	Appuyez la barre	Halek
Imbrogliate il maestro	Carga la vela mayor	Up mainsail	Carguez la grande voile	Istingee burra serr
Alate i bracchi di sopravento	Atiesa los brazos de barlovento	Round in the weather braces	Tenez les bras du vent	Lug boaper bras
Mainate il flocco basso	Hala el foque abago	Haul down the jib	Ammenez le foc	Tan neeche jeeb
Izzate ariva il trinchetto	Carga el trinquete	Up foresail	Carguez la misaine	Istingee tirkut
Brachiate in faccia le vele di poppa	Bracea en facha las velas de popa	Back the maintopsail	Brassez a culer les voiles d'arriere	Baksee burra gavee
Date fondo all'ancoro	Echa el ancla	Let go the anchor	Mouillez l'ancre	Chordo nungar
Imbrogliate le gabbie	Carga las gavias	Clew up the topsails	Carguez les huniers	Istingee gavee
Imbrogliate la mezzana	Carga la mesana	Brail the spanker up	Carguez l'artimon	Istingee goosee
Filate la gomena	Arrea el cable	Pay out the cable	Filez le cable	Humar tirk*ou*
Serrate le vele	Ferra las velas	Furl the sails	Ferlez les voiles	Lupet*ou* serr
Mertete la bandiera	Iza la bandera	Hoist the ensign	Hissez le pavillon	Hukar nishan
Aducete la manovra	Aduja los cablos	Coil the ropes up	Rouez la maneuvre	Saf kur alat
Il timone alla via	Derecha la cana	Right the helm	Droit la barre	Sookan seedha
Ola bastimento!	Bastimiento ho!	Ship ahoy!	Batiment ho!	Ho juhaz wallah!
Come si chiama il bastimento	Que es el nombre del buque	What ship is that?	Quel est le nom du navire	Kis juhaz?
D'onde venite	De donde viene vd*	Where are you from?	D'ou veñez vous	Kuhan se ae ho
Dove andate	Adonde va vd	Where are you bound to?	Ou allez vous	Kidhur jate ho
Quanto tempo sul viaggio	Quantas dias del navigacion	How many days out?	Combien de jours en route	Kitne dinon
Annunziatemi	Relata me	Please to report me	Faites rapport du moi	Khubur mera d*ou*
Documenti de bastimento	Papelas de buque	Ship's papers	Papiers du bord	Kaghaz juhazka
Lettere di construzione	Carta de construccion	Register	Contrat de construction	Rookh sut
Conoscimenti	Conocimientos	Bills of lading	Connoissements	Jay nuseebka

* Pronounced "usted."

* Pronounced like *ou* in sound.

ITALIAN.	SPANISH.		FRENCH.	BENGALEE.
Certepartie	Contrata de fletamento	Charterparty	Chartepartie	Ekrar nama
L'ultima certificato	Las ultimas certificaciones	Cockets	Les derniers declarations	Rouwana
Manifesto	Manifiesto	Manifest	Manifest	Jay bojhaee
Certificato di sanita	Carta de salud	Bill of health	Le certificat de santè	Char chithee
Registro dell'equipaggio	Rol de la tripulacion	Muster roll	Le role d'equipage	Jay juhazeeka
Libro di loche	La habitacora	Log book	Livre de loc	Rojnama
Lettera di cambio	Lettra de cambo	Bill of exchange	Lettre de change	Hoondee
Lettera di credito	Carta de credito	Letter of credit	Lettre de credit	Pottro jomakee
Ricetta	Recibo	Receipt	Quittance	Roschid
Que volete	Que quiere	What do you want?	Que voulez vous	Kya mang ta too
Come si chiama questo	Como se llama este	What do you call this?	Comment appellez vous celle ci	Yih nam kya

POINTS OF THE COMPASS.

It sometimes happens that English sailors are put on board of Foreign ships, either as pilots or assistants; therefore, an acquaintance with their compass points and cards is desirable.

"North," on the cards of all nations, is marked by N, except the Italian, and that is marked by T. South, on those of the French, Spanish, Swedish, German, and Danish, is marked by S; on the Dutch cards by Z, and the Italian by O. East, on the cards of the French and Spanish, is marked by E; on those of the Swedish, German, Danish, and Dutch, by O, and the Italian by L. West, on the cards of the Dutch and German, is marked by W; on those of the Danish and Swedish by V; on those of the French and Spanish by O, and on the Italian by P; therefore, O, in the French and Spanish cards, means the point diametrically opposite to what it stands for in those of the Swedish, German, Danish, and Dutch; and in the Italian, O is at right angles to where it is placed in all other cards; however, the old Italian cards are now seldom met with, the French being used instead.

Lascars, except when speaking of the wind, do not use points in Bengalee, having only the four cardinal and the four intermediate points, and when one of the others is spoken of it is named according to its distance from the cardinal points, by ek, do, teen (one, two, three).

The sookanees or helmsmen of Lascar ships are generally Malays, or natives of the Philippine Islands, so that having the points expressed in Bengalee is never necessary

ITALIAN.	SPANISH.		FRENCH.	BENGALEE.*
Tramontana	Norte	North	Nord	Oottur
Quarto di tramontana per greco	Norte cuarto al nordeste	N by E	Nord quart nord est	Oottur ek nishan kona
Greco tramontana	Nor nordeste	N N E	Nord nord est	Oottur do nishan kona
Quarto di greco tramontana	Nordeste cuarto al norte	N E by N	Nord est quart de nord	Oottur teen nishan kona
Greco	Nordeste	N E	Nord est	Nishan kona
Quarto di greco levante	Nordeste cuarto al este	N E by E	Nord est quart d'est	Mutlu teen nishan kona
Greco levante	Este nordeste	E N E	Est nord est	Mutlu do nishan kona
Levante quarto greco	Este cuarto al nordeste	E by N	Est quart nord est	Mutlu ek nishan kona
Levante	Este	East	Est	Poorub mutlu
Levante quarto sirocco	Este cuarto al sudeste	E by S	Est quart sud est	Mutlu ek soolee mutlu
Sirocco levante	Este sudeste	E S E	Est sud est	Mutlu do soolee mutlu
Sirocco quarto levante	Sudeste cuarto al este	S E by E	Sud est quart d'est	Mutlu teen soolee mutlu
Sirocco	Sudeste	S E	Sud est	Soolee mutlu
Sirocco quarto di ostro	Sudeste cuarto al sud	S E by S	Sud est quart d'sud	Soolee teen soolee mutlu
Ostro sirocco	Sud sud este	S S E	Sud sud est	Soolee do soolee mutlu
Ostro quarto sirocco	Sud cuarto al este	S by E	Sud quart sud est	Soolee ek soolee mutlu
Ostro	Sud	South	Sud	Soolee
Ostro quarto libeccio	Sud cuarto al sud oueste	S by W	Sud quart sud ouest	Soolee ek soolee kiblu
Ostro libeccio	Sud sud oueste	S S W	Sud sud ouest	Soolee do soolee kiblu
Libeccio quarto di ostro	Sud oueste cuarto al sud	S W by S	Sud ouest quart de sud	Soolee teen soolee kiblu
Libeccio	Sud oueste	S W	Sud ouest	Soolee kiblu ukurub
Libeccio quarto ponente	Sud oueste cuarto al oueste	S W by W	Sud ouest quart d'ouest	Kiblu teen soolee kiblu
Ponente libeccio	Oueste sud oueste	W S W	Ouest sud ouest	Kiblu do soole kiblu
Ponente quarto libeccio	Oueste cuarto al sud oueste	W by S	Ouest quart sud ouest	Kiblu ek soolee kiblu
Ponente	Oueste	West	Ouest	Kiblu
Ponente quarto maestro	Oueste cuarto al nord oueste	W by N	Ouest quart nord ouest	Kiblu ek agnee kona
Ponente maestro	Oueste nord oueste	W N W	Ouest nord ouest	Kiblu do agnee kona
Maestro quarto ponente	Nord oueste cuarto al oueste	N W by W	Nord ouest quart d'ouest	Kiblu teen agnee kona
Maestro	Nord oueste	N W	Nord ouest	Agnee kona
Maestro quarto tramontana	Nord oueste cuarto al norte	N W by N	Nord ouest quart d'nord	Oottur teen agnee kona
Tramontana maestro	Nord nord oueste	N N W	Nord nord ouest	Oottur do agnee kona
Tramontana quarto maestro	Nord cuarto al nord oueste	N by W	Nord quart d'nord ouest	Oottur ek agnee kona
Rombo	Rumbo	Course	Route	Mojura

* Very seldom used.

VOLUNTARY EXAMINATIONS IN STEAM.

Steam is now so much used in navigation, that it will, in a few years, be made compulsory on all masters of steamers to pass an examination in that department, and with this view the Board of Trade have instituted a voluntary one, in order to open the way to, and prepare the seafaring community for, a compulsory examination, in the same way that the voluntary examination of the year 1845 was the precursor of the compulsory one of 1852.

Like the rigging of a ship, there are some things in a steam-engine which require oral and tangible explanation to be perfectly understood; and, after learning as much of the theory and principles as may be acquired from books, no place (engineers' yards excepted) is more calculated to give the necessary experience than by examining the different kinds of small engines used in tugs, ferry steamers, &c., for, except a voyage is made in a large steamer, there is little chance of learning anything in their engine-rooms while in port. In small steamers, the frequent stoppages and constant handling of all parts of the engine will soon make their uses manifest.

Even if a seaman makes a long voyage in a large steamer, he cannot acquire much knowledge of the engines, for, except in case of accident, they are seldom stopped, and when entering or leaving port the seaman has other duties to attend to, and cannot spare time to observe the working of the machinery.

While in port, every class of side lever, oscillating and direct action engines, can be seen in tugs and small river steamers, and an acquaintance with the master, or a pecuniary donation to the engineer, would be the means of imparting a better knowledge of the steam-engine than could be acquired by poring step by step over the theory in the very best treatise upon it.

Sailors very soon acquire a surprising amount of skill and experience in boilers, engines, and fuel, and in case of accident are ready in idea and handy in the engine-room; there is nothing extraordinary to be learnt, and to a person unacquainted with either, the parts of a steam-engine are far sooner understood than the rigging of a square-rigged ship; and when a fireman who serves no time in a fitting establishment, can be entrusted with the care and management of the machinery, (as in many steamers they are,) there is nothing to prevent a sailor from knowing as much with practice.

The want of this kind of experience caused confusion and disorder in the earlier years of steam navigation; for the commanders, even in the Royal Navy, were very much at the mercy of their engineers, who could, with impunity, report imaginary difficulties in the way of doing anything that was at the time disagreeable to them; and very often the high rate of wages given to these men, in comparison to mates, made them over estimate themselves, although the latter had to serve twice as long a period as the engineers had, to learn their business. All this is fast disappearing, and the mate is becoming as conversant with the steam-engine as he is with the construction of the hull of a ship, and though he may be incapable of constructing or repairing either, in a few years the first-class seaman will be able to manage both with equal precision, and to direct the engineer with the same confidence with which he issues his orders to the carpenter.

The Board of Trade has given notice that "Arrangements have been made for giving to those masters, or applicants for masters' certificates, who desire to do so, an opportunity of undergoing an examination as to their practical knowledge of the use and working of the steam-engine. These examinations will be conducted under the superintendence of the Local Marine Boards, at such times as they may appoint for the purpose; and the examiners will be selected by the Board of Trade from the engineer surveyors appointed under the Steam Navigation Act.

"The examination will not comprise intricate theoretical questions, but will be such as to satisfy the examiners that the applicant is competent to control the working of the engine, and has such a knowledge of the ordinary parts of the machinery as will enable him to judge of the nature of an accident, and in the absence of the engineers, to give the necessary directions in the engine-room."

The following are the questions in the Act, and the writer has appended answers to them; they are not intended to pass an inexperienced person, who might commit them to memory, but to shew applicants what answers would be given by an engineer, and more fully to indicate the nature of the questions themselves. A better selection of questions might be made, for some of them repeat, as in the case of steam guage, guage cocks and glasses, which must be answered again in the 7th, 20th, and 35th questions.

ANSWERS TO THE QUESTIONS GIVEN TO COMMANDERS UNDER EXAMINATION ON THE PRACTICAL USE OF THE STEAM-ENGINE.

Boilers, Valves, and Cocks.

Explain the nature and use of safety valves?

They are to allow the steam generated by heat in the boilers to escape after it attains a certain pressure.

The reverse valves?

To allow the air to enter the boilers when cooling, in order to prevent them from collapsing by the external pressure of the atmosphere, or by the engines using the steam too freely.

Communication or stop valves?

Are fitted to the boilers, so that one may be shut off from the rest, and from the engines, in case of accident.

Feed valves?

Are fitted to the feed pipes to keep the water from coming back after it has been pumped into the boilers by the feed pumps.

Kingston valves?

Conical valves in the ship's side, which can be closed in case of accident to the blow-off cocks.

Blow-off cocks?

For blowing the water out of the bottom of the boilers into the sea, and with it the sediment of salt, lime and other deposit.

Communication cocks?

For keeping the water at the same level in the boilers, or for shutting the feed from one or more of them.

Water guage cocks?

To indicate the height of water in the boilers, in case of accident to the glasses, or the cocks getting stopped.

Glass water guage?

A glass tube communicating with the boiler at the top and bottom of the tube, to shew the height of water in the boilers.

Steam guage?

Is a bent pipe, containing mercury, communicating with the boiler, to shew the amount of pressure therein; for every increasing pound of pressure the mercury rises an inch.

Hand pump for boilers?

For filling and feeding the boilers, or working the water hose.

Engine Valves and Cocks.

Throttle valves?

Are fitted on the steam pipe for regulating the supply of steam to the cylinders.

Slide valves?

Are fitted on the face of the cylinders for admitting and shutting off the steam from the cylinders and condenser.

Expansion valves?

Are situated between the throttle and slide valves, and are for cutting off the steam at different parts of the stroke, and allowing it to expand in the cylinder.

Escape valves, on top and bottom of the cylinder?

To allow any water, or too strong steam that may be in the cylinder, to escape.

Blow-through valves?

Are fitted between the valve casing and the condenser, to blow the water out of it by steam, before starting.

Foot valve?

Is at the bottom of the air pump, opening towards it, to prevent the water returning from the air pump into the condenser.

Delivering valve?

Is at the top of the air pump, to prevent the water returning thereto.

Air pump bucket valve?

On the air pump bucket, which opens while descending, and closes while ascending.

Injection valve and cock?

The valve is fixed on the condenser, and the cock on the ship's side, for regulating the supply of injection.

Bilge pump valves and cocks?

Are fitted to the bilge pumps for opening and closing, as the plunger ascends or descends; cocks are fitted to the different bulkheads, for pumping from each compartment.

Stop or sluice valves to discharge pipes?

Valves placed in the ship's side, to prevent water from getting into the engines when at rest.

Jacket cocks?

Cocks fitted in the jacket of the cylinder, to allow the condensed steam to escape before starting.

Snifting valves?

Are fitted at the bottom of the air pump, to allow the water and air to escape while the engines are being blown through.

Boilers.

1. If the safety valves were set fast, how would you relieve the pressure on the boilers, if steam was up and could not make its escape?

Partially close the damper, blow the boilers partly off, draw the fires, or play the water hose on the furnaces, open the blow-through valves and gauge cocks; if the vessel be well moored, the engines may be set in motion. Much steam may be got rid of by easing the cover of the valve casing.

2. How do you ascertain the saltness of the water in the boilers?

By the hydrometer or thermometer; the former should not indicate above 20 degrees of saltness, or the latter more than 215 degrees of heat, when the water is boiled. Hydrometers are seldom marked alike; but they should sink as far in boiled salt water as in cold fresh water.

3. How would you change the water in the boilers if the blow-off cocks were set fast?

By opening the gauge cocks and allowing the water to run into the bilge, or by carefully slacking the mud-hole door.

4. If the boilers are thin, what measure would you adopt to prevent accidents?

Reduce the pressure by easing the safety valve, and repair as soon as possible.

5. How would you keep the boiler free from salt and incrustation?

By frequently blowing off part of the water.

6. For what purpose is the hand-pump to the boilers requisite?

For filling the boilers and keeping the water up while the engines are at rest.

7. Explain the use of gauge cocks and glasses fitted on the boilers?

To shew the height of water in the boiler.

8. If the mercury was blown out of the steam gauge by the pressure of steam in the boilers, what would you apprehend was the cause?

An over-pressure of steam, or it might be caused by the pitching of the vessel.

9. What would you do to relieve the pressure of the boiler?

Ease the safety valves, partially close the dampers, and open the furnace doors.

10. How would you regulate the height or quantity of water in the boilers?

By the cocks in the pipes from the feed-pumps.

11. When the steam is up, how is the feed applied to the boilers?

By the feed-pumps, if the machinery be in motion, and by the hand-pump or donkey-engine, if the vessel be stopped.

12. When the steam is not up, what is necessary to be done before the fires are lighted?

It is necessary to run the water up as high as it will go in the boilers, and then pump up to the proper level.

13. When the engines are stopped, what precautions are necessary with regard to the water in the boiler?

It is necessary to keep them pumped up to the proper level.

14. What is meant by a boiler priming?

The agitation or boiling up of the water is called priming.

15. How would you prevent it doing so?

By opening the furnace doors for a time, and if there is sufficient water in the boilers, blowing some of it off, and pumping in a little cold water; tallow is used for the same purpose with good effect.

16. If the water in the boiler is suffered to get too low, what may be the consequences?

The boilers may burn, and perhaps burst.

17. What height should the water stand in a common boiler above the flues?

From six to twelve inches.

18. What height should the water stand in a tubular boiler above the tubes?

Somewhat higher than in a flue boiler, because the water is in a more fermented state.

19. If any of the tubes were damaged by fire, or leaky, what would you do, supposing you could not shift them?

Plug them up.

20. How would you detect the pressure of steam in a boiler?

By the steam gauge.

21. If the water is suffered to get too high, what might be the consequences?

The water might get through the steam pipe into the cylinder, and probably cause a break-down.

22. How would you know when the water in the boiler requires changing?

By trying its density by the thermometer and hydrometer.

23. Explain the use of the thermometer and hydrometer.

The thermometer shews the degree of heat, and the hydrometer shews the density or saltness of the water.

Engines.

24. Explain the use of the cylinders?

Cylinders are for containing the steam, and giving motion to the pistons.

25. Explain the use of the air pump?

It is for pumping the air and water out of the condenser.

26. Explain the use of the condenser?

It is for condensing the steam, and thereby producing a partial vacuum, after it has done its duty by pressure in the cylinder.

27. Explain the use of the eduction pipe?

It is the communication between the cylinder and condenser.

28. Explain the use of the hot water cistern?

It is that part of the engine above the air pump, from which the feed (already heated) is pumped into the boilers.

29. Explain the use of the piston, and how fitted?

It is for working upwards and downwards in the cylinder, and imparting motion to the machinery; it is fitted with packing, usually metallic, with springs to keep it close to the interior surface of the cylinder, also a junk ring to keep the packing in its proper place.

30. Explain the use of the stuffing-box and glands?

The stuffing-box is for containing packing to keep the piston air-tight, while working through the cylinder cover; the glands are for compressing the packing.

31. Explain the use of the parallel-motion rods?

They are for keeping the piston-rod parallel to the inside of the cylinder.

32. Explain the use of the excentric, and how fitted?

It is to give motion to the slide-valves, and is fitted with an excentric wheel, loose on the shaft, with a stop at a certain point for going a-head or reversing; the rod is fitted with a gab and apparatus for throwing it out of gear.

33. Explain the use of the starting lever?

It is to work the slide valves by hand, before the excentric is let into gear.

34. Explain the use of the barometer?

It is to indicate the amount of vacuum in the condenser.

35. Explain the use of the steam gauge?

It is to indicate the pressure of steam in the boiler.

36. The vessel is alongside the wharf, proceed to get the steam up?

The water must be run up in the boilers, then shut the blow-off cocks; they must be then pumped up to the proper level by hand or by a donkey-engine, if fitted; then light the fires.

37. When the steam is up, how is it applied to the engines to set it in motion?

It is admitted to the cylinders, above or below the piston (as it may be required, according to the position of the crank,) by working the slide-valves.

38. What precaution is necessary before the engine is set in motion?

It is necessary to blow the water out of the condenser by the blow through valve.

39. How do you start the engine?

By admitting steam to the cylinder, and partially opening the injection cock.

40. Is it necessary to move the engine by hand a turn or two before starting?

It is, in order to heat and clear them of water.

41. The engines being started, regulate the injection cocks to keep them going at full or reduced speed?

The temperature of the condenser ought to be about 100 degrees in these latitudes, and the temperature increased in warmer climates.

42. What is the use of the injection?

To condense the steam as it enters the condenser from the cylinder.

43. How is the vacuum maintained in a condensing engine?

By the condenser and air pump, and the rush in of the cold injection.

44. How do you know when there is too much injection?

By a thump on the engines, or by the discharge valves of the air pump lifting too soon.

45. How do you know when there is not enough injection?

When the condenser gets hot.

46. If the injection was not shut off when the engines are stopped, what would happen?

The engines would get choked with water.

47. If the condenser reject the injection, what would you do?

The condenser might be cooled by cold water being thrown on it; but if the engine has good way on it, or if there are two engines, the throttle valve might be partially closed, and the supply not getting into the condenser, the next stroke of the air pump would cause it to receive the injection.

48. Would it be advantageous if an injection pipe was fitted so as to take water from the bilge if required?

It would, in case of the ship making water.

49. If water should get into the cylinder, what might be the consequences?

The piston, the cylinder, or cover might be broken.

50. In running free with a heavy sea and a jump upon the engines, what precautions would you take to endeavour to prevent damage to the engines?

It is necessary to stand by the throttle valve and injection, to close them as the vessel takes heavy rolls.

51. If one engine was damaged, what would you do in order to proceed?

It would be necessary to disconnect it from the other.

52. If the excentric should break, could the engines still be worked?

They may still be worked by hand.

53. If a bearing becomes heated, what would you do?

The bolts of the covers should be slackened, and melted tallow and sulphur poured on it; cold water may be applied slowly and carefully till it cools down.

54. How would you slow an engine?

It is slowed by partially closing the throttle valves and injection cock.

55. How would you stop an engine?

By throwing the excentric out of gear, and shutting the slide valves and injection cocks.

56. Wherein does a high pressure differ from a low pressure engine?

A high pressure engine has no condenser or air pump.

57. How do you admit tallow into the cylinders when the engines are at work, for the purpose of lubricating the pistons?

By opening the grease cock on the cylinder while the piston is ascending. and closing it while descending, that is, opening it on the vacuum side.

58. What is meant by working the engines expansively?

By allowing the steam to expand in the cylinder, by cutting it off at different parts of the stroke.

59. How would you disconnect the engines if there was no disconnecting gear fitted?

By taking off the connecting rod straps.

60. What is meant by throwing the engines out of gear?

Disconnecting the excentric from the slide valve lever.

61. Why have two feed pumps fitted, say, one to each engine?

A feed pump is fitted to each engine, so that if one be disconnected the feed may be supplied by the other.

62. Is it requisite to have branch pipes fitted to the feed pumps; if so, for what purpose?

They are requisite for regulating the supply of feed to each boiler, so as to keep the water up to the proper level in each when the vessel lays over, or in case of accident to one boiler.

HEALTH OF SEAMEN.

To keep a ship's crew in a healthy condition, something more is requisite than a medicine chest, with its book of directions; for, if proper attention be paid to the prevention of disease, much of its contents would be brought home again untouched. Some men get a taste for quackery, and practise without mercy on their sailors; others think that a dose of salts sent forward to a man off duty, is quite sufficient to prepare him to "turn to" next morning; and if that fails, a mustard plaster or a dose of croton oil is the alternative.

The forecastles of merchantmen kill thousands of seamen, and lay the germs of premature death for many more: though often washed, it is lumbered in such a way that it can scarcely ever be thoroughly dried; to do which, without a thorough draft, an occasional fire is absolutely necessary, though never thought of in Southern-going ships, and even in the tropics one is absolutely necessary for a perfect and healthy ventilation.

The forecastle is directly over, and in direct communication with, the coal-hole,—a place which in the best ships is seldom properly cleaned out; it is filled at the commencement of a voyage, and if all the coal has not been used, it is filled up again without removing what remained; and even if all is used, a clean sweep is the only preparation made before refilling. It should not only be washed out, but well aired and dried before more coal is taken in, for the gases generated by the coal, and the leakage of beef, pork, tar and varnish casks, will be quite enough for one voyage, without adding the debris of the previous one.

The sick should, if possible, be removed from the healthy portion of the crew; for, besides being unhealthy, nothing is so dispiriting to a man after severe duties on deck, as to be obliged to attend on the sick, when he comes below to a close, crowded berth, the smell of which may drive him on deck to sleep in the rain.

In small ships it cannot be expected, but in large ones a better water closet accommodation is desirable, for many a poor fellow dies through exposure from want of it; for, until they are nearly at the point of death, sick seamen will not allow their messmates to perform for them any disagreeable offices. Enlarging on this subject is unnecessary—every seaman and every passenger must know the truth of these remarks.

Although a fuss is sometimes made about the cleanliness of the galley and caboose, there is very little attention paid to the cooking of the messes of the crew: the English are behind all other nations in this respect, though owners may be often cried down as penurious and stingy, they are, with few exceptions, liberal in providing necessary stores and provisions, which, if not the best, are paid for as such, and the faults of the cook and the neglect of the place where provisions are stowed are too often left upon the unfortunate owner. A man who is unfit for any other post in a ship considers himself quite competent to superintend the cooking of a sailor's mess, and consequently *boils* the tea, *burns* the coffee instead of roasting it, and wastes nearly half of every thing that is put into his hands. A good cook will more than save his wages, not only in the provisions but in the sanitary condition of the crew, for, if he knows his *business*, he can, with a few dollars, collect many things in a market to make a sailor's mess comfortable for a long voyage. Onions, with attention, will keep for a long time, and sailors generally are very fond of them, but they are seldom put on board a ship in large quantities: there are many other things which appear trifling to attend to while in port, yet at sea would be considered a treat and used with the greatest relish. A portion of the men's mess should be placed on the cabin table every day, so as to let the cooking be seen, and to prevent in time any dissatisfaction among the crew; in this case, as in many others, prevention is better than cure, for many a serious mutiny commenced by a row about provisions, where the master, instead of seeing justice done at first, fires up at the idea of the crew demanding it.

When, after a fit of sickness, a man turns to his work, it is too often the case that he is unfeelingly "served out" for being sick at all, and gets extra work and unnecessary exposure, many being under the impression that excepting the illness preceding death, a sailor has no business to be sick at all. If a convalescent man gets unnecessary exposure to wet, it may endanger his life; and sailors are not often well off in clothing, and are too apt to keep their wet ones unchanged.

The old-fashioned system of carrying a slop-chest was a good one, and should not be discontinued, as it always insured comfortable clothing, even to the most improvident. Some masters do not carry one, because the profits they would expect on the different articles might draw censure from the public and contempt from the seaman, and consequently much costly clothing might remain on their hands; others, from nearly an opposite reason, would sell nothing to seamen, lest it might be supposed that they wished to wheedle them out of their wages.

But if a chest of well-made sea-clothes was kept on board, either by the master or owners, and sold to the men at a reasonable profit, it would be conferring a benefit on them, and it might be the means of preventing many diseases which are the consequence of exposure and of the bad clothing, given them after all their money is spent by boarding-house keepers, who are anxious to get rid of them, to make room for a fresh arrival, with plenty of cash, when the landlady says, "Rise up, Jack, let *John* sit down."

When an outfitter puts a bale of clothing on board on speculation of selling part of it on the voyage, it is usually fine toggery, or such slops as are likely to sell in the country to which the ship is bound. Nothing but the most serviceable articles should be kept, such as blue flannel shirts, woollen stockings and drawers, twilled calico coats ready for oiling, with a jar or two of waterproofing mixture; sea-boots, if good, are sure to sell, for nothing gives dysentery sooner than constant wet feet. In light weather blue flannel trowsers would be much more serviceable and comfortable than duck or canvas, which in the rain of the tropics are stiff and heavy, besides being constantly damp and uncomfortable, constantly causing fever, cramp, and rheumatism. All trowsers put on board should be unhemmed at the bottom of the legs, to be afterwards regulated to the size of the wearer. If such things were put on board for the sailors, it would be just as creditable to shipmasters as selling to them at a large profit, the tobacco taken out of bond.

Sailors should be discouraged from wearing belts or knife lanyards very tight round their waists, as it is almost certain to cause hernia: for in some positions the intestines get under the ligature, and a sudden jerk of the body upwards may cause an incurable rupture.

Cheerfulness and gaiety are the greatest preventative of disease, which in the evenings should be encouraged, and a few pounds spent in the Shilling Library would save more than the same amount in the medicine chest; but many consider that, if allowed a few hours watch below in the day-time in their gloomy cave, it is sufficient indulgence for sailors; and if in the day-watches, loud laughter or boisterous mirth is heard, they are threatened with getting something to do that will "make them laugh on the other side of their faces." This is enough to breed disorder of body and of disposition, and it would be a miracle if the exuberance of spirits natural to seamen would not, under such treatment, turn to disaffection and insubordination.

Some masters, either fanatically religious, or pedantically scientific, wishing to inoculate their crews with their own ideas, would only lend such books as would tend to the attainment of this end; this is all well in moderation, but light reading, cheerfulness, and occasional amusement, will make a more orderly and healthy ship than hard work, gloomy piety, and constant exposure.

Captain Cook, in his letter to Sir James Pringle, 5th March, 1776, says, "The crew were at three watches, except on some extraordinary occasions; by this means they were not so much exposed to the weather as if they were at *watch and watch*, and they had generally dry clothes to shift themselves when they happened to get wet; care was also taken to expose them as little as possible.—These, Sir, were the methods, under the care of Providence, by which the 'Resolution' performed a voyage of three years and eighteen days, through all the climates from 52 degrees North to 71 degrees South, with the loss of *one man only*, by disease, and who died of a complicated and lingering illness, without any mixture of scurvy."

Here it is seen that the regular watch and watch, advocated by the writer, was considered even too much exposure for Captain Cook's men, and his opinion ought to be treated with respect, for his whole career proved him to be a humane, intrepid, God-fearing commander.

GENERAL CONDUCT.

There is nearly as much depending on the regular demeanour and general bearing of the mate, as on his professional knowledge. Although he may be a good seaman, if in his conversation and ordinary manners he is inferior to the meanest in the forecastle, he may get work done, but will not be respected.

When he commences a voyage with a new crew, instead of trying to make himself "look big" by swearing and bullying, interlarding his expressions with gross epithets and obscene similes, he should conduct himself with mildness and decision, sufficiently reserved to be unapproachable by those who are disposed to attempt familiarity, and avoiding the opposite extreme of ridiculous vanity, by aping the officers of the Royal Navy in dress. It is not by this he will gain the respect of any person, and a man of common sense must feel ashamed if rigged out in a mock uniform, he meets a real one in the street.

As in some of the nautical prints, correspondents have suggested the adoption of uniform, and some companies compel their masters and mates to wear one, the writer thinks it but fair to state his reasons for disliking the practice.

If it be desirable that the masters of the merchant service be men of education and gentlemanly bearing, it is unfair to insist upon men possessing these qualities wearing what their feelings will tell them is only a livery, for the uniform of a private company is nothing more, although it may be even more costly than that worn by navy officers.

The Dock Committee of Liverpool insist on the piermasters wearing uniform, but the dockmasters, who fill a more respectable and better paid position, wear plain clothes, and the gentlemen of the committee know that it would be insulting men of education and respectability to require them to appear in any other.

The gentleman can easily be seen in plain clothes, but not so easily detected in uniform, particularly when that same uniform is worn by others, who, although they may be vain of its glitter, have the appearance more of policemen or railway guards than of gentlemen, who generally prefer to be undistinguished otherwise than by their manners and bearing.

For the same reasons, the good old sailorlike name of mate is preferable to the absurd title of officer, which is held in common with policemen, beadles, and bailiffs. No person need be ashamed of the title of mate, as it is an euphonical term with an unmistakeable meaning.

His attire should be at all times neat and scrupulously clean, but avoiding the use of all ornament, for a "flash" mate is seldom respected by the master, and only ridiculed by the crew.

In foreign ports he should not do as the generality of English sailors,—quarrel with, and abuse the inhabitants; nor consider that the soldiers and police there are his natural enemies.

Englishmen in general imagine that when they go from home there is no authority high enough to restrain them, and where they find opposition it is considered as tyranny. The behaviour of English sailors abroad gives foreigners but a poor estimate of the manners and morality of the British nation; as regards the former, every candid observer will acknowledge that our lower classes are inferior to, and, in the latter, they are no better than those of any other country.

It is disgusting to see the scenes that are of daily occurrence in the East; the gentle and harmless Hindoo, and the shrewd and intelligent Chinaman, kicked and belaboured by men inferior to them in every thing except brute force.

It cannot be wondered at if the proud Spaniard or dignified Turk turns on his heel in scornful silence after delivering his message with the air of an aide-de-camp, when it is received with a growl or an imprecation. The man who has to mix so often with foreigners should have as much consideration for their feelings as for those of his own countrymen, and in his dealings or disputes with either should be as superior to exultation as to apprehension.

The leisure hours of the mate might be passed more profitably than in smoking, reading song books, or sleeping. Instead of contenting himself with being a mere tar, he should try to know something more of the scientific principles of his profession than is barely necessary for common requirements. To know navigation perfectly, the course of reading and study to be gone through extends over so many branches of science, that it is impossible for any person to know them well and remain an ignorant man.

Five-sixths of the navigators of the present day, though quite competent to find their position at sea with all the precision that practice requires, are altogether ignorant of the formation or nature of the rules by which they work. They know that by adding this logarithm and subtracting that, or by applying given corrections that they obtain certain results, but why they do so is a thing beyond their comprehension. They know that the Nautical Almanac gives all the data that they may require, but are totally ignorant of the manner in which the compilers anticipate the position and movements of the heavenly bodies. The investigation of the construction of the tables in the epitome which they daily use is beyond their abilities. So low has the merchant mariner fallen in this species of knowledge, that there is no book put into his hands that will teach him anything more than the mere practice, or "rule of thumb," except one by professor Riddel, which, although one of the cheapest, and the only one in which the rules are investigated and the scientific principles taught, is seldom used.

Many will say that there is no occasion for the mariner to be an astronomer or a mathematician; this is quite true, for the modern navigator has not to contend with the same difficulties that Columbus and his immediate successors had to surmount. The seas are now literally measured, wherever there is water enough to float a ship, the place is accurately surveyed, and its dangers are pointed out; and the real and apparent movements of the heavenly bodies are tabulated, so that the superior qualifications of the early navigators are no longer absolutely requisite. But that is no reason why we should be prevented from knowing how the mighty mind of Columbus could navigate without the assistance of tables, or foretell an eclipse of the moon to the Indians without an almanac.

After the practice of navigation is well known, there is no way in which the leisure hours of the mate can be spent to more advantage than in the study of those sciences upon which it is founded. It combines in its theory more of the sciences than perhaps any other study. It is necessary to know geometry, plane and spherical trigonometry, not superficially, but in all the subtleties of its analysis, for which algebra and the highest branches of arithmetic are necessary. The principle and application of optics is necessary to understand the nature of the instruments used, and it may be said that it is the only study where the sublime science of astronomy is applied to practical and daily use.

However, the study of these sciences ought to be a secondary consideration to the practical mariner, matter-of-fact practice taking the place of every thing else; and as the British and George's Channels are places where the seaman's skill and energy are oftenest required, no opportunity should be lost that might improve his knowledge of their soundings, tides and dangers.

The study of foreign languages would tend much to the improvement of mates; it is the neglect of this that causes the ill feeling that Englishmen bear towards foreigners. How much more comfortably and agreeably does the mate who understands the language get along in a foreign port, than one who roars out in English to the natives, and curses their stupidity for not understanding him? It is not so much to be wondered at if we cannot have a friendly feeling towards those from whom all communication or interchange of sentiment is cut off. If the knowledge of certain foreign languages was made a necessary acquirement of the mariner, it would go a long way to stifle this feeling. We may see this illustrated amongst the German seamen and those of the Channel Islands, who generally speak two or three languages, and it is well known that they can go ashore in any country without getting into the scrapes that the Englishman is sure to fall into.

The mate has many opportunities of learning languages from those foreigners amongst whom his business may lead him, and also from the custom-house officers who are generally placed on board in foreign ports; these men, like the same class in our own country, are very intelligent, having little else to do than read, and are, therefore, acquainted with many subjects and possess a large amount of general information, so that their often unwelcome society might be turned to advantage.

It is wrong to imagine that the sometimes very tainted circle a sailor meets with in a foreign port is a criterion to judge by of the manners and morals of the country—it may cause him to appreciate his own the more; but if foreigners judge us by what they see in the neighbourhood of our docks and quays, they can have no very high estimate of English morality. Strangers in search of amusement are in general taken to those shows of vice that abound in all large cities, and in none more than our own.

An acquaintance with the principles and application of the steam-engine may now be considered a necessary acquirement, for when machinery of such extraordinary power and expense is sent afloat, it, together with those who superintend its working (no matter how clever) must be under the control of the mariner; he ought to be as familiar with its management and its construction as he is with ship-building, mast-making, or any other business connected with his calling.

Smoking should not be indulged in when strangers or superiors are present, before ascertaining that it is not disagreeable; however, so common has the custom become, that people inhale with perfect indifference the vapour that has already been in the mouth of another person, although they would consider it a punishment to be obliged to imbibe any other fluid that had been in the same place.

No shoal should be more carefully avoided than the imperceptible steps that lead a young seaman to drunkenness, which will be more difficult to eradicate as he grows older. It is a vice which in youth may be controlled, for young blood and spirits require no other stimulants; but in the old it assumes the nature and appearance of a loathsome disease, upon which no punishment, no shame, can have the least effect.

There is perhaps no vocation, profession, or trade where experience is of so much importance as that of the seaman; the usual apprenticeship may make a sailor, but not such as may be trusted from under the direct control of a superior. There are times when a rigid adherence to rules and principles must give place to the exercise of his own judgment, quick decision, and rapid execution. It is a pity, then, to see the man who has a great amount of almost instinctive knowledge fall a victim to a vice that will put all his experience in soak, perhaps at a time when it can least be spared.

It is usually the custom with the ignorant to endeavour to hide their many deficiences under a feigned roughness of manner and language, which is sometimes very disagreeable to others.

That so often lauded character, "blunt, honest John Bull," can hardly expect esteem if his bluntness is nothing but obstinacy and coarseness, and his honesty a rude vulgarity, and a total disregard of the feelings of those with whom he comes in contact.

It is this, together with the very common vice of drunkenness in the British mariner, that makes him hated by and inferior to foreigners.

All this, with a little trouble, may be overcome; for, though it cannot be expected that a sailor should have all the courtly polish of a man of fashion, yet there is nothing insurmountable to prevent his being, at the same time, the seaman and the gentleman.

FINIS.

BRIEF MEMOIR

OF THE LATE

CAPTAIN JAMES JOSEPH KELLY,

OF DUNDALK.

Captain Kelly was descended from one of the oldest and most respectable families in Louth—being eldest son of the late Thomas James Kelly, of Hainstown, Louth, and his mother being nearly related to the MacNeill families of Ballymascanlon. He was born on 1st June, 1822, and received the rudiments of his education in the School of the late Mr. Caldwell, of Dundalk, which he finished at the celebrated Seminary of Broadwood, in Lancashire.

Born within the echo of the roaring surge, he was familiar from his earliest years with the terrors of the ocean; and to his young imagination the profession of the sea-tossed mariner seemed the worthiest of adoption by a daring and adventurous spirit.

It would appear that either he had not communicated his resolutions to his natural guardians in his boyhood, or that they endeavoured to divert him from his perilous choice, for while his education extendid over a wide field of classical lore, his mathematical attainments were merely rudimentary. On leaving his boarding-school, he resolved to direct his mind to the study of Navigation, that he might be thoroughly competent for the highest ranks in the profession which he had now chosen; and following the advice of an experienced friend, carefully shunned all merely superficial treatises, which teach rules without teaching principles, and made himself thoroughly familiar with the principles of Navigation as developed in Professor Riddle's masterly volume.

After these preliminary studies, he was bound apprentice to Messrs. Brocklebank, of Liverpool, and joined the barque *Aden*, in August, 1839, under the command of Captain Henry Ponsonby, and served his apprenticeship in that vessel and the *Patna*, in the East India and the China trades. On the completion of his time he was appointed second officer to the brig *Globe*, on a voyage to the west coast of South America. By his ready obedience he soon won the confidence of his superiors, and his talents and acquirements soon gained for him the chief command, for which the steadiness, energy, and decision of his character eminently fitted him. In this capacity he voyaged with success to ports in the Atlantic, Pacific, Arctic, and Indian Oceans; also, to the Baltic, Mediterranean, and Black Seas; in fact his voyagings have been world wide. He resigned the service of Messrs. Brocklebank whilst in command of the *Hindoo*, in order to join that of a London House; but was induced after a time to return to that of Messrs. Brocklebank. He had the option of entering into the service of the Peninsular and Oriental Company, but a vacancy occurring in the Company belonging to his native town, he accepted office in it, being thus enabled, by his frequent presence at home, to comfort the declining years of his respected widowed mother, he being then her only child, and which position he generously preferred to the brighter worldly prospects that were presented to him elsewhere.

His services to the Dundalk Steam-packet Company were varied and extensive, and in every instance most satisfactory. The Company now mourn his loss with an intensity of feeling not usually experienced. He was one of the first members of the Liverpool Mercantile Marine Association, and took great interest in its advancement.

The literary and scientific attainments of Captain Kelly were of no ordinary character. He was an astronomer and mathematician of the first order, and had devoted much attention to classics and poetry; to history and the study of science he had devoted much time. A year or two ago he published a little work entitled "The Mate and his Duties," which commanded such a sale, that it soon ran into a third or fourth edition—and only on Monday last he had another work placed before the public, entitled, a "Companion to the Nautical Almanack."

With reference to this latter work, a correspondent, one of the most distinguished of the land, wrote to Captain Kelly, just about the very hour when the latter departed this life:—

"From your experience, and the labour you have bestowed on this work, I have no doubt it will be a valuable assistance to the nautical world; and when you are gathered to your fathers, advantages shall be derived from it by that forthcoming generation, which, in the order of nature, is always coming round to fill the places of the departing one.

"I almost envy that man who has both the *power* as well as the *will* to benefit by his experience and knowledge his fellow-men. And of all classes, and all professions, the most interesting in my mind is that of those 'who go down to the sea in ships and do business in great waters.' Many will, I trust, yet find advantage by referring to your book when in the dark night the howling tempest rages on all sides of them. How delightful a feeling it is to be useful to such a class, having the charge of the beloved parent, wife and child, as also of the untold treasures the boundless sea is the medium of transporting to all ends of the earth."

The value placed upon the works of Captain Kelly may thus be seen from this remarkable extract, which bears its own evidence of the character of the distinguished writer, with whom, and others of a similar class, he delighted to correspond.

In the social circle, too, the society of our friend was greatly prized, as all admired his cultivated mind and generous heart, and the ease and dignity which ever characterised him as the perfect gentleman.

When trading on the east coast of England with the steamer *Dundalk*, during a hurricane, on a voyage between Leith and London, a few years ago, Captain Kelly performed a very meritorious act in saving life from shipwreck, when at the same time others in government service, and far better prepared for such a task, had not the nerve to act. The *Dundalk* fell in with the brig————, stranded on the Orsel Bank, off Yarmouth, the brig was fast breaking to pieces, and the captain and crew were seen clinging to the rigging. In spite of the gale and the mountains of surf breaking over the bank (there being a master mariner on board the *Dundalk*, to whom the command could be entrusted), Captain Kelly stepped forward and called for volunteers among his crew, three of whom and a sailor passenger answered the call; they launched a boat, and with great danger and difficulty succeeded in saving the lives of the captain and four men. But this was only one of many similar acts accomplished by him, not from love of applause, which he always endeavoured to avoid, but prompted to its performance solely by that high nobility of character which thought not ot danger in the path were duty pointed. His crowning act was thus only in keeping with his whole character, by which he sacrificed his own life in the heroic and humane endeavour to save the lives of others; and thus Dundalk now mourns the loss of one of her noblest sons, and society one of its brightest ornaments.

In 1845, as his steamer was leaving the Clarence Basin, Liverpool, a passenger coming late and trying to jump on board, fell into the dock; Captain

Kelly had the engines stopped, jumped overboard, got the drowning man round the waist, held him till he made a rope fast round him, and they were both hauled up safely to the quay.

On the morning of Tuesday, 5th April, 1858, two vessels were driven into Dundalk bay—one a Dutch schooner, which was driven on shore at Blackrock, and was soon broken to pieces by the violence of the waves; the other a barque, the *Mary Stoddart*, of Scarborough, Captain Hill, bound from Alexandria to Glasgow. Captain Johnson, of the steamer *Enterprise*, observing the flag of distress flying on board the barque, went to her assistance. After several unsuccessful attempts to get a hawser on board, and as it was impossible for her to approach Dundalk (the harbour not being deep enough), the *Enterprise* left her, the *Mary Stoddart* having come to an anchor, and the Captain having hauled down his flag of distress to show that he felt secure. There was a very high sea running at the time.

The storm during the day and on Tuesday evening was very severe, so much so that none of the steamers of the port would venture out for Liverpool. On Wednesday, it was determined to send the *Independence* to relieve the *Mary Stoddart;* and accordingly, at half-past three in the afternoon, she steamed down the river and approached the *Mary Stoddart*, when Captain Johnson volunteered to go on board the barque. A boat was with much difficulty lowered from the steamer, and Captain Johnson with four men pulled to the barque; a life-buoy with rope attached was thrown to him, and he was hauled up the side of the vessel. After remaining some time the gale increased, and he did not deem it prudent to attempt to reach the steamer. He wrote a note, requesting the steamer might keep at sea till morning, when she would be signalled what to do. The *Independence* accordingly kept to sea till morning, and on her return found that the barque had either broken from or dragged her anchors, and got aground in about 12 feet water, where she lay. At high water her deck was covered more than 5 feet, and the crew were obliged to take shelter in the rigging, but they came down on the poop after each tide had ebbed.

On Thursday morning, the life-boat belonging to the *Enterprise* made an unsuccessful attempt to rescue the poor fellows from the wreck; but, after struggling with all their might, were compelled to return. Two boats also were manned by Mr. Connic and put off from Blackrock, but were also compelled to return without being able to reach the wreck.

About fifteen minutes after Mr. Connic's boats had started, Captain Kelly arrived at Blackrock, and, with his accustomed courage and generous zeal, he asked had anything been done to rescue Captain Johnson. On hearing that Mr. Connic had manned two boats, and that they were on their way, he cried—"Bravo!" He had been busy from first thing in the morning, getting the cork bags, &c., taken from the life-boat of the steamer, (thinking the life-boat would be too heavy to pull against the storm,) and fitted into a fisherman's yawl, and brought them down to Blackrock. In spite of the persuasions of William Gilmore, his mate, who wished to take her out himself, Captain Kelly would go out in her, agreeing with six men for £1 each to accompany him, and they were soon struggling with the waves and storm, but compelled to return without effecting their object. Thus Thursday passed away, the storm still raging, without any succour arriving to the ship's crew or poor Captain Johnson, on whose behalf the most intense feeling of commiseration was felt in Dundalk.

On Thursday evening, at a meeting of Captains at Dundalk, Captain Kelly volunteered to take a boat out first thing on Friday morning. He still felt that the life-boats would be too heavy to manage in so high a sea, dead against them, and therefore proposed that one of his own boats of the

Pride of Erin should be fitted with the life-boat apparatus, and taken out instead. This was agreed to, and he with his crew of volunteers, consisting of Gerald Hughes, James Murphy, and James Crosby, all dead; John Lamb, Pat Callen, and Thomas M'Ardle, living, examined the four boats of the *Pride of Erin*, and ultimately fixed on the starboard quarter boat. The Mate immediately equipped her with the cork bags of the life-boat, (so as to make her into a kind of life-boat,) two life-buoys, lines, boat-hooks, oars, &c.

It was arranged that one of the steamers of the port should take the boats in tow, so that the men might not be exhausted before reaching the wreck; and in case it should be impracticable for any of the large steamers to cross the bar, that the steam-tug *James Watt* (as she required far less water) should take them in tow.

Captain Kelly with his crew was down at the steamer at three o'clock on Friday morning, making all things ready and seeing to the proper equipment of his boat. At four o'clock the gale still continued with great fury, and Captain Williams, *Earl of Erne*, Captain Byrne, *Independence*, and the Captain of the Coast Guard Station, decided that it would be impossible to bring a large steamer over the bar. Directions were then given for the steam-tug *James Watt* to get up steam, but from some cause (not yet satisfactorily explained) the engines could not be got to work. Captain Kelly was anxious to start at once when he found the tug could not be got ready but was persuaded to wait for daylight, as it was impossible to say what change the fearful storm of the night might have wrought in the position of the wreck. He left the harbour at half-past eight, and pulled down the river on his last voyage. Alas! that we must write it. Captain Hinds followed with his crew in the life-boat of the *Independence*.

The two boats pursued their course, braving the fury of the storm in gallant style, where we shall leave them and direct our attention to the scenes at Blackrock.

At half-past ten o'clock, Mr. Lewis, Mate of the *Earl of Erne*, volunteered to go out from Blackrock to the barque, in the life-boat of the *Enterprise*, which had been there on the previous day. The storm still raged with much fury, and the waves were very difficult to encounter, being what are called "short," and rising to a great height, the boats dropping from them bows foremost, and presenting a fearful appearance to those on shore who looked on with glasses. Mr. Lewis's crew worked with all their might, but for an hour they only made a mile towards the vessel.

We now return to the boats which left Dundalk. On reaching the lighthouse, about twelve o'clock, they rested for some time, and were within a mile and a-half of the *Mary Stoddart*, Captain Kelly then sung out, "Let us go on in the name of God!" and away they pulled towards the barque. On nearing her Captain Kelly brought his boat as near as possible to the lee-side, and one of the men in her got hold of the leechrope of the trisail of the ship, and Captain Kelly called on Captain Johnson to go on the poop, and jump into his boat. Captain Johnson, we understand, stated that he was too weak to make the effort, and Captain Kelly said to the crews of both boats that they could render no assistance to the crew. They then commenced to pull for the shore, when a tremendous wave struck Captain Kelly's boat, and raising the stern of the boat overturned her. The captain and crew, with a great struggle, succeeded in getting upon her bottom, but were no sooner there than she was struck by another wave, and all were dashed into the sea, and the boat righted. The crew succeeded in getting into her, and Captain Kelly laid his hand on her for a moment, but from the intense cold could not keep his grasp, and was then seen about twenty yards off, making an effort to swim. He then raised his hands aloft as in the attitude of praying, and said—"Lord have mercy on me! Farewell, boys, take care of yourselves; God be with you all," and disappeared. The capsized boat had lost its oars, and now drifted at the mercy of the waves. It was then taken in tow by the life-boat of the *Enterprise*, which started from Blackrock, and which came up at the time. Murphy was taken out dead, Crosby in a weak and fainting state, but died soon after, and Hughes's body was washed ashore. Thus, out of this band of seven heroic men three only survived to tell the sad tale.

The melancholy intelligence of the catastrophe soon reached Dundalk, and loud were the lamentations and many the tears shed for the death of the noble hearted and generous Captain Kelly, who, in the prime of life, and full of health and spirits, sacrificed his life to rescue others from death.

[*From the Liverpool Journal, April 17th,* 1858.]

In the melancholy fate of Captain James Joseph Kelly, of the Dundalk steam-packet *Pride of Erin*, who lost his life in a second attempt to rescue the crew of the barque *Mary Stoddart*, driven by the late hurricane on the sands at the entrance of the bay of Dundalk, his friends in Liverpool, and particularly his nautical acquaintances, must have deeply sympathised. But the author of the "Mate and His Duties" has claims to a larger portion of our space than is usually assigned to a brief obituary.

[After describing his career up to the time of his obtaining his first command, it continues]:—

Even at this early period his quick and observant mind was ceaselessly at work. He felt that to command was far more difficult than to obey. His observations taught him that an insurbordinate spirit was too often traceable to the ill temper, incapacity, or ignorance of a commander. He noted carefully the duties which conscience exacts from subordinate officers. He sympathised in the sufferings of "the men before the mast." These observations and numberless others, that they might be as useful to others as to himself, he embodied in that beautiful, though unpretending little volume, "The Mate and his Duties," to which his modesty forbade him to affix his name. This work has already passed through a third edition. Another work, by Captain Kelly, has just issued from the press. It is entitled, "A Companion to the Nautical Almanac." This performance will long remain a monument of the untiring industry, the scientific acquirements, and the professional devotion of its lamented author. A letter from a scientific friend, to whom Captain Kelly, it would seem, had sent a copy of the "Companion," has just appeared in a public print, and this letter possesses a melancholy interest. It alludes to the good which this work will effect when its author shall have been gathered to his fathers. The letter reached his residence at the very moment when this self-devoting man was being engulphed in the maddened sea, or rather, as his virtues inspire his friends to hope, at the moment when the angel of mercy was cleaving the hurricane with electric wing, to liberate the pure soul of the strong swimmer in his agony, and waft it to a shore on which no angry surge shall ever beat. After several manifestations of professional skill, an incident occurred which must for ever endear the memory of this noble-minded man to his friends in Dundalk. The command of one of the company's packets became vacant. The appointment was offered to Capt. Kelly. This favour was not solicited. It could not have been acceptable, as it closed the boundless prospect of adventure and promotion But his widowed mother had just lost a younger son, a youth full of promise. Deaf to the suggestions of interest or ambition, Mr. Kelly hastened home, enlisted in the service of the company and strove to alleviate the sorrows of his bereaved parent. Even in this employment he gave a splendid proof of his courage and humanity. Sailing along the eastern coast of England, in a furious storm, he beheld a vessel in distress. Other vessels were in sight, but they lacked courage. The generous Kelly lowered his boat, manned it, and, at the imminent peril of his life, rescued an exhausted crew from a shattered wreck.

The directors of the steam-packet company have passed a resolution to erect a monument to the memory of their devoted servant. We hope it will be one worthy of the man, and of the cause in which he perished. It is true that Mr. Kelly himself needs no monument to perpetuate his remembrance. With his own hand he has deeply engraven this remembrance on the records of his profession in characters which time will be slow to efface. But the men of Dundalk gave tokens of bereavement worthy of a generous people. This is not enough. Let them symbolise their affliction by some noble erection which will do honour to themselves in years to come, and stimulate the youthful heroes who will inherit their land to noble exertions in the cause of humanity. We observe that the directors have appointed two citizens of Liverpool on their acting committee. This appointment will facilitate a manifestation of sympathy to the admirers of the deceased in Liverpool. Let the shipowners, the captains, the mates, and the men before the mast, ponder over the pages of the "Mate and His Duties," and their gratitude will awaken their generosity. The body of the heroic young captain may never be rescued from the deep. He may sleep till the last trumpet sounds in a sailor's grave, with nought but the moaning wind to chant his requiem. Even so, let a lofty cenotaph be raised on an elevated site on his native shore. It will be a moral beacon of hope and of strength to the sorely tempted and too often yielding mariner, when some companion will point to it as tribute to the memory of the bold, the dauntless, the charitable, the humane, the devoted, the virtuous, the pious James Joseph Kelly.

[In deference to the wishes of the Mother of Captain Kelly, the Steam packet Company have abandoned the design of erecting a monument, and the Committee have applied the subscriptions, which poured in fast and freely, to the relief of the families of the brave fellows who perished together with him.]

[*From the Newry Examiner*, *June* **16th.**]

THE INQUEST.

The body of the late lamented Captain Kelly, who so nobly sacrificed his life whilst endeavouring to rescue the crew of the barque *Mary Stoddart*, wrecked in our bay during the fearful gale in the beginning of last April, was found early yesterday morning in the river, between Soldiers' Point and Tipping's Quay.

At nine o'clock a.m. (same day) an inquest was held by Dr. Callan and a most respectable jury, of which P. Wynne, Esq., was foreman.

In addressing the jury the Coroner very feelingly passed a brief eulogium on the merits of the deceased, and said—" Gentlemen, a melancholy duty has called us together to-day; we are here to inquire as to the cause of the death of a man who was known individually to every one amongst us. In the early part of last April Captain Kelly, than whom a braver seaman never sailed a ship, volunteered to command a boat for the very laudable and humane purpose of saving Captain Johnson, of the steamer *Enterprise*, and the captain and crew of the *Mary Stoddart*, stranded in our bay. It is fresh in the memory of each of us, that he returned to Him who gave it a valuable life in the cause of suffering humanity, and, with three of the noble men who accompanied him, died the death of a hero. It is unnecessary I should say a word of his merits, where he was so well known and appreciated, for even amongst strangers and in far distant lands he has always been respected and loved by those who have met him. By the men under his command—and this of all others is the best test and standard of a man's real merits and goodness of heart—he was almost idolized. I recollect him since we played together little children, and believe that a nobler heart or more frank and honest nature were never given by Almighty God to his own image and likeness upon earth. He has gone from amongst us—he has died a death of honour, and to the annals of his native town has left a memory that will never die, whilst honest sterling worth shall hold a place or heroism be immortalised."

Verdict—' That deceased, James Joseph Kelly, was drowned in Dundalk Bay, on the morning of the 9th April, 1858, whilst nobly endeavouring to save the lives of Captain Johnson, of the steamer *Enterprise*, also Captain Hill and crew of the barque *Mary Stoddart*, wrecked in said bay on the morning of 8th April."

[*From the Newry Examiner*, *June 19th.*]

FINDING OF THE BODY.

The name of the good man, whose premature death has occasioned so sad a void in local society, is in Dundalk and the county at large such a cherished "household word" that we feel bound, as much in deference to the public wish as in accordance with our own feelings, to communicate such particulars as will interest his surviving friends, whose name is indeed legion.

On Tuesday morning last, between three and four o'clock, the body of the deeply lamented gentleman was observed by a small farmer, named Boyle, lying, face downward on the strand opposite Soldiers' Point, in the direction of Ballymascanlon river. Boyle had no difficulty whatever in identification: Captain Kelly looked himself in all the characteristics of feature and expression. His colour, too, considering the long period which had elapsed since his death, was, to use Boyle's expression, "natural." There was hardly anything observable in the way of disfigurement, so that his identification would have been complete without any necessity for confirmation of it by his dress. We understand that one of his boots was washed off by the struggle in the deep and rough waters.

Boyle was impatient to communicate to all most interested that the body of one so universally beloved had been at length found, and, we believe, that without due consideration, he first personally communicated the intelligence at the residence of Captain Kelly's respected and bereaved mother. Numerous were the friends who at once repaired to the place where the body lay. Between six and seven o'clock the body was conveyed by the men of the Dundalk Steam-packet Company to Soldiers' Point, where the inquest was held, the particulars of which we published in our impression of Wednesday last.

The body was shortly afterwards removed in a coffin on board his own favourite ship, the *Pride of Erin*, and conveyed to the quay of the Dundalk Steam-packet Company, where, we believe, his mother, whose only strength is derived from the solace of religion and the Christian's resignation to God's will, took a "last, lingering farewell" of the mortal remains of her beloved son, not long since the pride and joy of her declining years. We will be excused for not dwelling longer on this melancholy episode—this deeply affecting incident in a narrative which must revive so many heart-

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present, but in the deep feeling of sorrow which pervaded *all.* The attendance of many persons at ordinary funerals is often ceremonial and out of mere respect. The attendance of all present at this funeral was prompted by an affectionate regard for the memory of Captain Kelly, who enjoyed an universality of sincere friendships, and whose heroic death was truly a noble, though painful, close of his well spent and edifying life. His death is indeed to be interpreted as a sacrifice of life to humanity. All who knew him grieve for the loss of a friend—not merely those of tender susceptibilities, but men familiar with the rough usages of the world and inured to trying scenes. Of Captain Kelly it may more truly be said than of the military hero:—

> "He sleeps the sleep of glory, and for him
> Stern hearts are sad, and manly eyes are dim."

Peace to his ashes!

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This work, on a subject of great importance, has been written by a sea captain. So far as we can judge of a subject so purely technical, the author is quite capable of adequately fulfilling the task he has assigned to himself Every possible duty which a mate may be called upon to fulfil is described in clear and concise language, and the directions and advice seem to be based upon the experience of a man cf large observation, and who speaks as one who has himself practically learned all he here undertakes to teach. He dwells at length upon the subjects of discipline, the mate's duties towards the master, the duties of the watch at sea and at anchor, describes minutely all unusual operations in rigging, and gives a variety of directions for the repairing, sewing, and cutting out of sails. Appended to the work is a copious vocabulary of sea-terms in Italian, Spanish, French, and Bengalee. No work lately issued from our local press appears to be of a more useful character than *The Mate and his Duties*, and if shipowners are wise, a few copies will be found in the library of every vessel sailing from this and every other port.—*Liverpool Times.*

NEW NAUTICAL WORK.—*The Mate and his Duties* is the title of a very useful manual published by Messrs. Rockliff and Son, which treats in a familiar style of the functions of the most important "officer" on shipboard. One of the most useful things in the whole work is a glossary of the words of command and sea-terms in the Italian, Spanish, French, and Bengalee languages, a desideratum, when we consider how many sailors of those countries are now employed in British ships. The practical character of the book may be inferred from a passage in the introduction, which states that it is "not written with a view of teaching the business of the mate to landsmen or those unprepared by previous service, but for the use of those who are supposed to have spent several years on board ship, and who have sufficient knowledge of those parts of their profession that can never be taught by theory."—*Albion.*

Within the compass of an ordinary-sized pamphlet, the duties of a Mate in the Merchant service are here laid down with remarkable minuteness, and treated in such popular style that even by shore-going people on the seaboard this *brochure* will be read with considerable interest. There is not a more gratifying feature connected with the seafaring class of the present day than the comparatively general diffusion, among the young men, of a desire to master the higher qualifications of their profession as well as acquire a knowledge of all the details of practical seamanship. Scarcely a week elapses in any seaport of ordinary size that a dozen of "Certificates" for various grades are not granted, and in every case, we are aware, a long and searching examination must have preceded the acquisition of the honourable diploma. Such a state of things is calling into existence a literature for itself, and it affords us, in this instance, great pleasure to give our meed of approval to one of the most valuable though unpretending of that class of publications.—*Sunderland Herald.*

The writer of this pamphlet simply calls himself "A Seaman," and he states that his book is written only "for the use of those who are supposed to have spent several years on board ship, and who have sufficient knowledge of those parts of their profession that can can never be taught by theory." We have no hesitation in believing that the writer is a practical seaman, and that his work may be read with pleasure not only by the mate but by the general reader. When a sailor tells his story in a straightforward manner; confines his narrative to what comes within his own experience, and expresses himself in his every-day language, he is sure to succeed. The pamphlet before us is about as practical and useful a publication as could be named, within the same compass. On the subject of discipline it gives many useful hints. And on this point the officers of a ship require more advice perhaps than on any other in their profession. The difficulties of the mate and of the master alike are great at times. Cut off as they are from the world, and under the necessity of preserving order—of keeping their place, of avoiding familiarity on the one hand, and harshness on the other; and this for months, or it may be for years, is no easy task. The writer of the "Duties of the Mate" gives some sensible counsel in these emergencies, and his book will assist the young officer, whilst it will help the matured seaman. In the practical part of the mate's duties, and in the science of his profession, there is much to learn from the experience of the writer, who says, "he has spent the best part of his life in the merchant service." A considerable portion of the book will be acceptable to the general reader, as giving an insight into the life of the chief officer at sea. —*Liverpool Courier.*

This is a small pamphlet, worth many a big book. Indeed, though small in dimensions, it contains the matter of a very fair-sized volume, owing to the type in which it is printed, which is small, but beautifully clear. The subject too is most important, not merely to the nautical men for whose use it is designed, but to the general public, whose property and lives are, necessarily, so often entrusted to the care of the mates of vessels. The present manual of duties has, after a first edition of a thousand copies, run to a second in a singularly short period—in itself no slight evidence of its value. It seems, indeed, a most comprehensive little work, giving valuable remarks on discipline, instructions in almost all the details of ship's duty, dissertations on the power of tacles, rules for the making of sails, and information of almost every kind, all in the clearest and most intelligible language. We have not often seen a work giving evidence of more practical knowledge, better explained, or more likely to prove useful to those for whom it is intended than this manual.—*Southern Reporter.*

This little book, which relates more especially to the mercantile marine, might almost have been termed the Merchant Officer's *vade mecum.* No merchant ship should be without a copy of it. The author's remarks upon discipline are sound and moderate, and the duty of the Mate to the Master is well defined. The observations upon rigging, repairs, and alterations of sails, and innumerable other nautical subjects, may be read with advantage by Officers and Seamen in general, whether in the Royal or Mercantile Navy. Not the least valuable portion of the book is a set of sea terms and phrases, in Italian, Spanish, French, and Bengalee, which will be found of great service in ships manned by mixed crews.—*United Service Gazette.*

It is but a few months since we welcomed the first appearance of this little *brochure,* on one of the most important subjects connected with our mercantile marine, viz., "the duties of the mate," and here we have it in a third edition. No better proof can there be, not only of how much it was wanted, but also of how much it is appreciated.—*Nautical Magazine.*

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